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his Book
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Cramer, Zadok

THE

NAVIGATOR:

CONTAINING DIRECTIONS FOR NAVIGATING

THE

MONONGAHELA, ALLEGHENY, OHIO, AND MISSISSIPPI

RIVERS;

WITH AN AMPLE ACCOUNT

OF THESE MUCH ADMIRED WATERS,

FROM THE

HEAD OF THE FORMER TO THE MOUTH OF THE LATTER;

AND A CONCISE DESCRIPTION

OF THEIR

TOWNS, VILLAGES, HARBOURS, SETTLEMENTS, &c.

WITH ACCURATE MAPS OF THE OHIO AND MISSISSIPPI.

TO WHICH IS ADDED,

An Appendix,

CONTAINING

AN ACCOUNT OF LOUISIANA,

AND OF

THE MISSOURI AND COLUMBIA RIVERS,

AS DISCOVERED BY THE VOYAGE UNDER CAPTAINS LEWIS AND CLARKE.

SEVENTH EDITION—IMPROVED AND ENLARGED.

PITTSBURGH,

PRINTED AND PUBLISHED BY CRAMER, SPEAR & EICHBAUM, AND SOLD AT THEIR BOOKSTORE, FRANKLIN'S HEAD, MARKET, BETWEEN FRONT AND SECOND STREETS.

[PRICE ONE DOLLAR.]

1811.

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1811
Cop. 1

DISTRICT OF PENNSYLVANIA, TO WIT:

(L. S.) BE IT REMEMBERED, that on the nineteenth day of September in the thirty-third year of the Independence of the United States of America, A. D. 1808, *Zadok Cramer*, of the said District, hath deposited in this Office, the Title of a Book the right whereof he claims as Proprietor in the words following, to wit:

"The Navigator: containing directions for navigating the Monongahela, Allegheny, Ohio and Mississippi rivers; with an ample Account of these much admired Waters, from the head of the former to the mouth of the latter; and a concise description of their Towns, Villages, Harbours, Settlements, &c. with accurate Maps of the Ohio and Mississippi. To which is added an Appendix, containing an account of Louisiana, and of the Missouri and Columbia rivers, as discovered by the voyage under Captains Lewis and Clarke. Sixth Edition—Improved and enlarged."

In conformity to the act of the Congress of the United States, intitled, "An Act for the Encouragement of Learning by securing the Copies of Maps, Charts, and Books to the Authors and proprietors of such Copies during the times therein mentioned." And also to the Act, entitled "An Act supplementary to Act, entitled, "An Act for the Encouragement of Learning, by securing the Copies of Maps, Charts, and Books, to the Authors and Proprietors of such Copies during the times therein mentioned." and extending the Benefits thereof to the Arts of designing, engraving, and etching historical and other Prints."

D. CALDWELL, *Clerk of the District of Pennsylvania.*

ADVERTISEMEN[illegible].

TO

☞ *THIS edition of the* Navigator, *being the seventh since the year* 1801, *is respectfully presented to the public. It being designedly calculated as an useful and necessary guide to those who navigate or trade on the rivers of which it treats, much pains have been taken to revise, correct, and enlarge it throughout; to do this satisfactorily, we have had the assistance of several of the most eminent pilots and navigators, and the use of late manuscript journals of gentlemen of observation, to whom we present our compliments for their aid and politeness.*

At a very considerable expense, the maps of the Ohio and Mississippi rivers have been added; and we flatter ourselves with the hope that they will be found as useful to the navigator as they have been troublesome to us.—These of the Ohio have been taken from actual survey—Those of the Mississippi partly from survey and partly from private charts, taken as accurately as the nature of that river will permit.

The account of the Missouri *and* Columbia *rivers, as traversed by captains Lewis and Clark, under the direction of the president of the United States, though but a brief view of that interesting voyage, we hope will be found entertaining. It has been collected from the letters of captain Clark and other publications since the return of the party.*

The account of Louisiana *is highly interesting; and it has been collected from documents published by the directions of the congress and executive of the United States, shortly after the acquisition of that country.*

This edition is considerably enlarged by a more comprehensive description of the principal towns on and adjacent to the rivers; their commerce and manufactures; natural curiosities of the country, &c. The directions for navigating the Mississippi river from the mouth of the Illinois to that of the Ohio river; with the description of the District of Mobile, and geographical notice of Florida, will be found interesting.*

Conscious of the imperfections of the Navigator we depend much on the goodness of others to detect its errours and point them out to us, in order that they may be corrected in a future edition; observations, also, either of the rivers or the country through which they run, tending to enhance its value and make it more generally useful, will be thankfully acknowledged.

Upon the whole, we can assure the reader, that we have spared no pains to make this a useful book, and nothing is wanting but his aid as an encouragement to continue our labours to make it still more so.

THE EDITOR.

February, 1811.

* See page 295, Appendix; received too late for insertion in place.

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TO

The Map of Pittsburgh.

0 Episcopal church, situated on the angle formed by the junction of Liberty and Wood streets. 1 Court house, on the opposite side of the street is the Market house. 2 Presbyterian meeting house. 3 Dutch Lutheran church. 4 Office of discount and deposit. 5 Fort Fayette. 6 Covenanters' meeting house. 7 Ship-yard, immediately below which Suke's run empties in. 8 Jail. 9 Ruins of Fort Pitt. 10 Scite of Fort Du Quesne. 11 Glass-works. 12 Academy.—On the N. side of the Allegheny, are two ferry-houses, the uppermost belongs to major Craig and the next below to James Robinson, esq. On the S. side of the Monongahela the first house above the glass-works is Jones's ferry, the next above Black's or Beattie's, the next Bousman's, the next widow Craig's, the next Herd's, and about half a mile above this, though not mentioned in the map, is Emmet's, and opposite to it is Andrew Watson's, esq.—On the right side of the Ohio, and opposite the entrance of the Allegheny, is a small island, about half a mile long. Some years since the state of Pennsylvania granted this island to colonel Killbuck, an Indian chief of the Six Nations, by whom it is still held. It is now called Smoky Island.—The hill to the S of the Monongahela is Coal-hill; that jutting out close to the ship-yard, is called Ayres-hill or Sillar banks, belonging to Andrew Watson, esq.

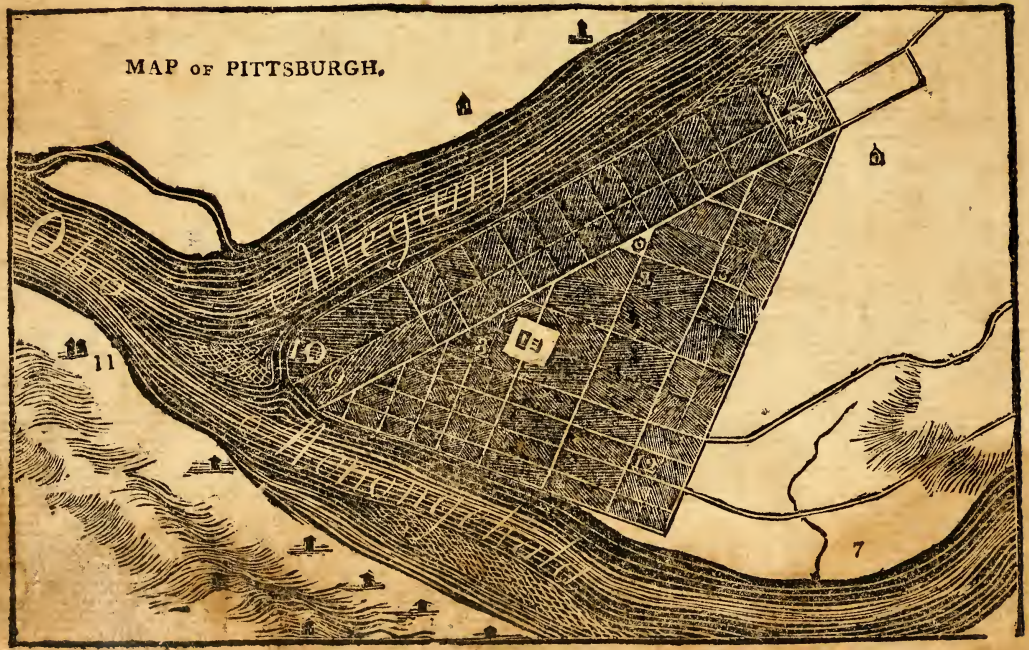
The point of Grant's hill (not represented) enters the square formed by Fourth-street, Hammond alley, Cherry alley, and Grant's street.

The streets running parallel to the Allegheny, are, first, Penn, and next Liberty; the cross-streets from Liberty to the Allegheny, are, beginning at the lowermost, Marbury and Hay streets, ——alley, Pitt street, ——alley, St Clair street, ——alley, Irwin's street, ——alley, Hand street, ——alley, Wayne street. Those running parallel with the Monongahela are, first, Water, Front, Second, Third and Fourth streets, Hammond alley, Fifth street, Virgin alley, Sixth street, Strawberry

alley, Seventh street, Plumb alley, Eighth street. The streets and alleys intersecting these are, beginning at the lowermost, West street, Short street, Redoubt alley, Ferry street, Chancery lane, Market street, Wood street, Smithfield street, Cherry alley, Grant street.

It may be noted that none of the streets cross each other at right angles except those from Liberty street to the Allegheny.

☞ The top of the map is due north, the bottom south, the right east, and the lower part west.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7

GENERAL DESCRIPTION

OF

The Rivers.

OF THE MONONGAHELA.*

NO country perhaps in the world is better watered with limped streams and navigable rivers than the United States of America, and no people better deserve these advantages, or are better calculated to make a proper use of them than her industrious and adventurous citizens.

The Monongahela takes its rise at the foot of the Laurel mountain in Virginia, thence meandering to a N. by E. direction, passes into Pennsylvania, and receives Cheat river from the S. S. E. thence winding to a N. by W. direction, separates Fayette and Westmoreland from Washington county; and passing into Allegheny county, receives the Youghiogheny river from the S. S. E. and unites with the Allegheny river at Pittsburgh, 13 miles below the mouth of the Yough, and about 55 by land, below the mouth of Cheat. The Monongahela is about 450 yards wide at its mouth, measuring from bank to bank, and in the fall and spring freshes has water enough to carry ships of 400 tons burden; these freshes, however, subside quickly, and render the navigation of such vessels very precarious.

The Monongahela, after it enters Pennsylvania, runs through a rich and well settled country. Its waters

* This word is said to signify, in some of the Indian languages, *The Falling-in-Banks;* that is, the stream of the Falling-in, or Mouldering Banks.

when high are coloured with the washy disposition of clay-loam land, of which is borne down with its current a thick sediment. Its banks are generally firm, bearing large and stately trees of the button-wood, hickory, white and black oak, walnut, sugar maple, beach, &c. and these afford a good supply of logs for the numerous saw-mills erected at and near the mouths of the creeks emptying into the river.

This river, like most others in this country, is accompanied with considerable hills on each side, which sometimes approach close to the banks, and again recede, leaving spacious and rich bottoms, in which are generally found large sugar-camps, each sugar tree producing, if well managed during the season, four pounds of excellent sugar, equal to Musquevado, especially if it has time to ripen before used; and each pound is worth 13 cents; thus a sugar-camp containing 500 trees produces 2000 pounds of sugar, worth 260 dollars. The sugar season seldom lasts more than a month or six weeks, and a camp of this size can be attended by one man and three or four boys to carry the water—thus leaving a handsome salary for each during a season that very little else can be done on a farm. The sugar season sometimes however is precarious, owing to the irregularity of the breaking up of winter, and the ushering in of spring. But it certainly would be provident in farmers to take special care of their sugar trees, and rather than destroy a grove of 50 trees, plant an orchard of 1000. In order to give a spur to this species of economy, our merchants ought not to receive a pound of sugar from over the mountains, and by this means give every encouragement for the use and consumption of sugar made at home. This would stimulate the farmer and reward the labourer. The policy of such a plan would be wise, and be the means of saving many thousands of dollars in the country, which are now sent out for sugars, of different kinds. Indeed I do not see why loaf and lump sugar could not be manufactured from our maple sugar as good as that produced from the West India sugar cane.

The land being generally rich on the Monongahela, crops of wheat, rye, barley, oats, buckwheat, corn, potatoes, &c. are raised in great abundance; flax and hemp are too much neglected. The Monongahela flour is celebrated in foreign markets, for its superiority, and it generally sells for one dollar more per barrel in New Orleans than any other flour taken from this country to that market. The best and greatest quantity of rye whiskey is made on this river. Peach and apple brandy, cider and cider-royal, are also made in great abundance.

The mean velocity of the Monongahela is about two miles an hour, and from three to four miles when very high. The floods seldom rise above the common banks; when they do, it is noticed as remarkable, and much mischief is done by the sweeping waters, as was the case in May, 1807, when the floods rose at Brownsville about 40 feet above the common surface of the river. It is said that at least 15 grist mills, on and near the river, between Pittsburgh and Morgantown, were carried off and destroyed during this fresh, and with them, about 5,000 bushels of wheat, rye, and corn. Several mills were seen floating past Pittsburgh in one day, out of which skiff loads of wheat were taken by the citizens.

The navigation of the Monongahela is pretty good in its middling state of water, for periogues, keels, canoes and skiffs from Pittsburgh to Brownsville, and from thence to Morgantown, a distance of about 100 miles above its mouth; above this the navigation is frequently interrupted by rapids, but small crafts may go up with difficulty as high as Clarksburgh, about 40 miles above Morgantown. The West branch of this river in high water is navigable for 15 miles, and communicates with a Southern branch of Little Kenhawa, by a portage of eight or ten miles.

It is matter of much importance that an easy and short portage could be had to connect the waters of the Potomack with those of the Monongahela. The head waters of Cheat and the Potomack, come together

within about 30 miles, to which portage however, the navigation of both rivers is difficult, but might be rendered much better by clearing them out. Goods are at this time frequently boated up from Alexandria, Georgetown, &c. as high as Fort Cumberland, whence they are taken in wagons to Brownsville, a distance of about 80 miles.—By this route it costs about $2 50 per hundred pounds, from Alexandria to Brownsville, which is a saving of about $2 50 in the 100 lbs. when brought all the way by land.

On the Monongahela old fortifications are frequently discovered, as vestiges of a people of whom time has kept no other record, and of whose character the present race of man can form but a feint idea; for like the mammoth, they have left nothing behind them but evident marks of their once having possession of the country, and having been well acquainted with the arts of war, and perhaps as well with those of peace, if we may judge from the quantity and quality of pottery, and many other articles of household convenience, found all through this country, as well as in many parts of the United States; all shewing the work of ingenious artists. Curious carving on rocks, are to be seen on many parts of the Monongahela. At the mouth of Ten mile creek, above Redstone, there are many; some bearing the shape of a man's foot, a horse's foot, a hand, head, a turkey, a fish, birds, beasts, &c. all apparently carved by a people having had more tools than our Indians can be supposed to have had in those early periods of time. Of the nation of people having left those curious traces behind them, some ingenious writers are strongly disposed to believe them to have been from Wales in Britain; but it is highly questionable whether their history does not go far beyond the history of England, or any other part of Europe, and I have sometimes thought the discoveries of time may yet prove them older than the earliest history we have of the world. How they became extinct, be they whom they might, is a question equally difficult of solution.

One of the principal branches of the Monongahela is the Youghiogheny river, whose sources are divided from those of the Potomack by the Allegheny mountain; from the falls, where it intersects the Laurel mountain, to fort Cumberland, the head of the navigation of the Potomack, is 40 miles of very mountainous road. On the Youghiogheny and the streams emptying into it, are a number of valuable forges, furnaces, saw and grist mills, some fine farms and villages, among which Connelsville, 45 miles by land above Pittsburgh, is the principal one. It is a thriving little town of Fayette county, 11 miles north of Uniontown, and 20 south of Greensburgh. It has near it five furnaces and five forges, one rolling and slitting mill, several saw and grist mills, and a paper mill is now erecting two and a half miles above town by Messrs. Walker and Rodgers. A Mr. Lauderburn has discovered an extensive bank of earth near Connelsville, which when burnt, serves all the purposes of Spanish brown in painting, and of which he has already supplied the Messrs. Skeltons of Pittsburgh with 60,000 lbs. The Youghiogheny at Connelsville forms a considerable rapid or fall of water, which is highly susceptible of improvements in water-works of all kinds. Part of Connelsville lies on the first bank, which was overflooded in the freshet of Nov. 11, 1810, and a part on an elevated second bank. Part of the old bridge across the river opposite the town was taken off in this flood, a chain bridge to supply its place is now in contemplation.

OF THE ALLEGHENY.*

THIS is a beautiful, large, and navigable river, taking its rise in Lycoming county, Pennsylvania, within a few miles of the head waters of Sinemahoning creek, a navigable stream that falls into the Susquehanna river, to which there is a portage of 23 miles. Thence pursuing a north course, passes into New York state, winding to the N. W. about 20 miles, turns gradually to the S. W. enters Pennsylvania, and meandering in about that direction 180 miles, joins the Monongahela at Pittsburgh.

Few rivers and perhaps none excel the Allegheny for the transparency of its water, or the beauty of its bottom, having a fine gravelly bed, clear of rocks and uninterrupted by falls. Its surface is unbroken, and its mean velocity is about $2\frac{1}{2}$ miles an hour; when high it runs at the rate of four miles an hour, being a little more rapid in its course than the Monongahela. Its waters in some instances have proved medicinal; and the fish caught in it are allowed to be superior to those of the Monongahela.

The Allegheny in its windings receives many large and tributary streams: among these are the Kiskiminetas, which is navigable for batteaux 40 or 50 miles, and good portages are found between it and the Juniatta; it enters the Allegheny about 14 miles below Kittanning, the county town of Armstrong county, Pa. lat. 40° 40'—45 miles above Pittsburgh. The Kiskiminetas receives in its course Little Conemaugh and Stone creek, which forms its head waters; after their junction it is called Conemaugh river; it then receives Black Lick from the N. E. and 17 miles from its

* The word *Allegheny* seems to have been derived from an ancient tribe of Indians called the "*Tallegawe*," who, though represented to have been a tall and stout race of men, were totally routed and extirpated by the Delawares and those of their stock. The Delaware Indians do not say, "Allegheny"—but "Allegawe," and again "Allegawenink," which signifies with them as much as to say, "in the country of the Tallegawe—or the country inhabited by the Tallegawe, or Allegawe people."
Western Tour—p. 455.

mouth Loyalhanna creek enters from the S. S. E.—Muhulbucktitum, another branch of the Allegheny, 20 miles above, is passable in small crafts to the settlements in Northumberland county, Wheeling is its northern branch.—Toby's creek enters the Allegheny 20 miles below Fort Franklin, may be navigated in flat bottomed boats a considerable way up, thence by a short portage to the west branch of the Susquehanna, by which a valuable communication is formed between the Ohio country and the eastern parts of Pennsylvania.—French creek is a N. Western branch of the Allegheny, and enters it at Fort Franklin, 80 miles N. E. of Pittsburgh; it is navigable to Le Bœuf, now called Waterford, from whence to Erie there is a portage of 15 miles, on which a turnpike is now erected.

The Allegheny affords another communication to Lake Erie by way of the Conewango creek, at whose head is a small lake called Chatauque, thence to Portland, a new town laid off by Mr. John M'Mahon, on the bank of lake Erie, there is a good portage of but 9 miles. A small creek, called Chatauque, enters lake Erie at Portland, which is about 30 miles below the town of Erie, in the state of New York.

The trade carried on between the lakes and the Ohio, by way of the Allegheny and its branches, is at this time very considerable, and must in a few years become of great importance. There are about 4000 or 5000 barrels, and sometimes more, of Onondago salt brought down to Pittsburgh annually, worth per barrel 9 dollars, making an average of about 40,000 dollars worth of traffic in this one article. Exclusive of the article salt, there are an immense number of boards, shingles, and lumber of different kinds, floated down to Pittsburgh and the country below on the Ohio. The quantity of boards and lumber that arrive yearly at Pittsburgh from the Allegheny and French creek, is supposed to be about 3,000,000 feet, averaging about 9 dollars per 1000 feet, amounting to 27,000 dollars; this added to the amount of the salt, makes the handsome sum in domestic trade of 67,000 dollars.

In the fall and spring of 1809—10, the quantity of Onondaga salt had increased in our market to the amount of between 12, and 14,000 barrels, averaging eight dollars per barrel, amounting to about 104,000 dollars. So great a quantity however may not again be expected from that quarter, since the owners of the Kenhawa salt works say they can deliver at this place any quantity at from five to six dollars per barrel, a price at which it is thought impossible to deliver Onondaga salt, owing to the great distance it has to come, and the frequent reshipments, storages, land carriage, &c.

In return the keel boats ascend loaded with whiskey, iron and castings, cider, apples, bacon, and many other articles of home production—and merchandize of foreign importation.—As long as the water keeps good, that is, neither too high nor too low, boats are ascending and descending continually, making a trip up in 17 days, and down in 5 days.

It has been suggested that goods might be brought by water from New York to Pittsburgh by way of the lakes and this river, for three cents a pound, which is one half less than is generally given from Philadelphia to Pittsburgh. By this Northern route, which would certainly be a very long and tedious one, there would be a portage of 15 miles from Albany on the Hudson or North river to Schenectada on the Mohawk, thence up that river and through Wood creek into lake Ontario, thence up Niagara river to the falls, thence 10 miles around Niagara falls, thence by water up Erie lake to the town of Erie, thence 15 miles portage to Waterford or Le Bœuf, thence down French creek and Allegheny river, making in all a land carriage of 40 miles from New York to Pittsburgh, a distance by this route of not less than 850 miles.

The brig Dean, Galley Ross, and several other vessels of burden, were built on the Allegheny, and we hope to see many more borne down by the current of this beautiful stream. A brig of 160 tons burden was put on the stocks at the mouth of Plumb creek, on the

Allegheny river, 12 miles above Pittsburgh, in the fall of 1809, and launched in the uncommonly high freshet* of November 11, (Sunday) 1810. She was constructed and built by Nathan Jones, shipcarpenter, and is owned by Brintley Robbins, an enterprising farmer. The brig is calculated for a double-decker, and will serve either for peace or war. She is of handsome construction and perhaps has not been exceeded for beauty or durability by any that have left the western waters.

The Allegheny river joins the Monongahela nearly at right angles, and its current being more rapid, it generally marks its course across the mouth of the latter river, and forces the current of the Monongahela on the opposite shore with great impetuosity. Though their streams are now united, the clear and transparent water of the one and the muddy appearance of the other, form a singular contrast, and this difference is plainly observable ten or fifteen miles below their junction.

* The Allegheny and Monongahela rivers rose at this place at a most rapid rate from about sunset Saturday evening until Sunday 12 o'clock at night, when they appeared at a stand, and soon began to give signs of withdrawing their floods from the already injured and alarmed inhabitants of their banks. The waters rose about 37 feet above the common level of the rivers, and both streams seemed equally strong, for neither appeared detained by the other in their sweeping courses. The water of the Monongahela was within eight feet of the level of Market street, and ascended Wood street gutters to Front street, and measured four feet on the ground floor of Mr. Graham's tavern, corner of Wood and Water streets, and about the same depth in Messrs. T. & J. Cromwell's ware house. The public wharf on the Allegheny river, opposite Fort Fayette was carried off. Penn and Liberty streets were inundated, and the first floor of James Robinson, Esq's. house, which stands on a second bank on the west side of the Allegheny, is said to have been covered with water.

A curious circumstance took place at Marietta. The Ohio had backed up the Muskingum for 12 miles, and occasioned a considerable retrogade current, into which some New Orleans boats got, and being enveloped in a heavy fog, they discovered their mistake by being hailed as ascending the Muskingum.

This flood appears to have been about five feet three inches higher at Pittsburgh than those of 1807--8, which were at that time considered to have been the highest known for 20 or 30 years.

The Allegheny is about 400 yards wide at its mouth, and when Smoky island lying to the N. W. is washed away it will be nearer eight.—It runs through an immense tract of country, much of it rough and hilly land, the greater part of which is yet to be settled.—This river as well as the Ohio, are known and called by the name of Allegheny river by the Seneca, and other tribes of the Six Nations of Indians, from its head waters until it enters the Mississippi.

Among the natural advantages of the waters of the Allegheny, is *Oil* creek, which empties into that river about 100 miles from Pittsburgh. This creek issues from a spring on the top of which floats an oil similar to that called Barbadoes tar, and is found in such quantities that a person may gather several gallons a day. The oil is said to be very efficacious in rheumatic pains, rubbed on the parts affected. The troops sent to guard the Western posts, halted at this spring, collected some of the oil and bathed their joints with it; this gave them great relief from the rheumatic complaints, with which they were afflicted. They also drank freely of the water, which operated on them as a gentle cathartic.

This oil is called *Seneca Oil* in Pittsburgh, probably from its first having been discovered and used, by a nation of Indians of that name.

It is a wise plan in Nature, to generally place an antidote where she has planted a poison.—No climate perhaps is more subject to pains of the rheumatick kind than ours, arising from the sudden transitions of heat to cold, and vice versa—and if it be true that the qualities of this oil are so effectual in the cure of diseases to which we are more or less subject, from the nature of our climate—it is equally true that Nature in her wisdom, has not been unmindful of her general plan of providing a good for an evil in this particular instance.

On the Allegheny and French creek, there are large bodies of low lands, covered with fine white pine and hemlock. These are noble trees, measuring from three to five feet in diameter at the butt; are remarkably tall

and straight, and without limbs to near the top. They are well calculated for masts of ships, and can be floated down in high water with ease to Pittsburgh, thence down the Ohio and Mississippi; the heavy sediment of the latter river however, would perhaps tend to sink them and make them troublesome to float.—These white pine swamps afford also an immense number of excellent boards, and shingles and lumber of different kinds, of which Pittsburgh consumes annually about 2,000,000 feet; and rafts are frequently taken down as low as Beaver, Wheeling, Marietta, and Cincinnati, and sold at from 90 cents to $1 50 per hundred feet, advancing the price as they descend. Boats go loaded with pine boards even to New Orleans, where they sell for about 3 dollars per 100 feet.

Among the numerous advantages of the Allegheny river, there is one which may have escaped general observation, and this of immense value. We are unfortunately situated with respect to streams affording sufficient water for mills, &c. at all seasons of the year. The water of the Allegheny presents itself as forming a complete remedy for the evil complained of. This, by taking the water out of the river, ten or fifteen miles above the town, in a canal of a handsome breadth and depth, and conveying it down on the side of Quary, to the point of Grant's hill. From this canal there might be as many mills of every description requiring from 12 to 15 feet and upwards of fall, as would stand in a distance of two or three miles. This to be sure would cost a handsome capital. But no matter since there is a security of that capital being expended in a stock which would probably yield 15 or 20 per cent. and a stock too as permanent as the running of the waters of the Allegheny itself. The thing at present may be thought visionary, but I should not be surprised were life to last to see some of the children now shouting about the streets of Pittsburgh, engaged in this project some 20 or 30 years hence.

OF THE OHIO.*

The junction of the Allegheny and Monongahela rivers form the Ohio, and this discharges itself into the Mississippi, (in N. lat. 36° 43′ Hutchins—37° 0′ 2″ and W. long. 5° 55′ 38″ according to Mr. Ellicot†) about 1188 computed miles from Pittsburgh. The Ohio in its passage to the Mississippi, glides through a pleasant, fruitful, and healthy country, and carries a great uniformity of breadth, from 400 to 600 yards, except at its confluence with the Mississippi and for 100 miles above it, where it is 1000 yards wide; about 100 miles above the falls, which are 705 miles below Pittsburgh, it is 700 yards wide.

The Ohio has been described, as "beyond all competition, the most beautiful river in the universe, whether we consider it for its meandering course through an immense region of forests, for its clean and elegant banks, which afford innumerable delightful situations for cities, villages, and improved farms: or for those many other advantages, which truly entitle it to the name originally given it by the French, of "*La Belle Riviere*," that is, "the Beautiful or Fair river." This

* This name is said to signify in some of the Indian languages Bloody; so that the Ohio may be translated the River of Blood. *Brackenridge's Gazette Publication.*

† Mr. Ellicot in his Journal down the Ohio, having arrived at the mouth of that river, observes, "On the top of the stump of a large tree, to which the zenith sector was fixed, a plate of lead was laid, containing the latitude and longtitude of that place. The stump was then covered by a mound of earth of considerable magnitude; but which will probably be demolished in a few years by the annual inundations." Mr. Ellicot and his party were detained at the mouth of the Ohio, in consequence of the inclemency of the season, from the 18th Dec. 1796, to the 31st of Jan following, during which period, he ascertained from accurate observations, the latitude and longtitude of the junction of the Ohio, and Mississippi rivers as above stated. It may be proper to inform the reader that Mr. And. Ellicot was appointed commissioner on the part of the U S for determining the boundary between them and the possessions of his Catholic majesty, from the year 1796 till 1800.

description was penned several years since, and it has not generally been thought an exaggerated one. Now the immense forests recede, cultivation smiles along its banks, towns every here and there decorate its shores, and it is not extravagant to suppose, that the day is not very far distant when its whole margin will form one continued village.

The reasons for this supposition are numerous—the principal ones are, the immense tracts of fine country that have communication with the Ohio by means of the great number of navigable waters that empty into it; the extraordinary fertility, extent, and beauty of the river bottoms, generally high, dry, and with few or no exceptions, remarkably healthy, and the superior excellence of its navigation, through means of which, the various productions of the most extensive and fertile parts of the United States, must eventually be sent to market.

For 30 miles below Pittsburgh it takes a N. W. course, then turns gradually to the W. S. W. and pursuing that course for about 500 miles, turns to the S. W. for nearly 170 miles, then it turns westward 280 miles, thence S. W. 180 miles, and empties itself into the Mississippi, in a flat and swampy country, where there are no hills to variegate the scene, nor mountains to overtop the union of these two noble streams.

The numerous islands that are interspersed in this river, in many instances, add much to the grandeur of its appearance, but they embarrass the navigation considerably, particularly in low water, as they occasion a great many shoals and sandbars. The soil of the islands for the most part is rich, timber luxuriant, and the extent of many of them considerable. Fruit is raised to great perfection on them, and seldom fail of a crop, as is generally the case in all the river bottoms.

In low water the navigation of the Ohio is difficult to the old Mingo town,* about 75 miles below Pitts-

* This was the only Indian village in 1766 on the banks of the Ohio from that place to Fort Pitt; it contained at that time 60 families. *Hutchins.*

burgh; from thence to the Mississippi it is good for keel boats or barges carrying from 100 to 200 tons burden; up from thence it may be navigated with smaller crafts. In times of high water, vessels of 400 tons burden can descend with ease, except the difficulty arising from managing so unwieldy a bulk at the points of islands and short turns in the channel of the river. Vessels of this tonnage have descended from Pittsburgh to Orleans in safety, but the chance of good water renders the undertaking a little hazardous. The Falls, however are much the greatest impediment, for unless vessels happen to hit the time of the highest stage of the water, they are either detained perhaps till the next season, or if they attempt a passage over them, a wreck in part or in whole may be the consequence, in either case putting in jeopardy property to an amount that few individuals can bear the loss of. A lock-canal round the Falls would remove this difficulty, and be of an immense advantage to the Ohio trade, and to the people on or near the river from the Falls up to the head of the Allegheny and Monongahela rivers.——. There has been some talk of attempting the commencement of this lock-canal. What jarring and clashing interests prevent the undertaking, are not easily to be found out. It can scarcely be supposed to be the want of a publick spirit in the Kentuckians or their legislature.

There are many smaller impediments, however, in the river from Pittsburgh to the Mingo-town, which may be as long getting removed as even the Falls themselves: these consist of rocks that might be blown to pieces, and ripples that might be easily cleared out in such a way as to make the channel good through them. This is certainly an important national concern, but the people must begin to act first, before their representatives will bring the thing forward in the house of general assembly. It must be done by grants of monies from the state, aided by subscriptions from the people; both must be liberal and vigilant, or the object will never be accomplished.

The consideration for opening the navigation of the Ohio, has become a matter of greater importance and necessity for the interest of Pennsylvania now than ever before. The United States road from Cumberland on the Potomack, to Wheeling on the Ohio, when completed will naturally draw a great deal of the trade of the northern states, to the states of Ohio, Kentucky, Tennessee, and to Louisiana, through that channel, thereby abridging very much the trade from those states through Pennsylvania. Therefore if Pennsylvania looks closely to her own interests, she will find that the completing the turnpike road from Harrisburgh to Pittsburgh, and opening the navigation of the Ohio, are the two principal objects which will tend to secure to her, her usual commercial, foreign and domestick, advantages. Exclusive of the probability of the United States' road drawing the trade to the south of Pennsylvania, New York state, on the north, is pushing her inland navigation, and opening easy communications from one end of the state to the other, by way of turnpikes, canals, &c. to an extent unparalleled in any other state in the Union. The spirit of the people in the back part of the state of New York is peculiarly turned to this point, and no exertions seem to be lacking in the industry of the one class; or money wanting from the other. The purses of the one and the labour of the other seem to be happily united for the good of the whole. When this is the case a state must flourish in her internal improvements and of course advance to wealth and independence.

The Ohio river has on its left in descending, Pennsylvania as far as the mouth of Mill creek; Virginia to the mouth of Big Sandy river; and the state of Kentucky about 60 miles below the mouth of the Ohio. On the right, Pennsylvania to the line crossing just below the mouth of Little Beaver; the state of Ohio from thence to the mouth of the Great Miami; and below this the Indiana territory to the Mississippi river.

It receives in its course many large and navigable

streams, the principal of which are; On the right, Big and Little Beaver, Muskingum, Sciota, Little and Great Miami, and the Wabash. On the left, Little and Great Kanhawa, Sandy, Licking, Kentucky, Green, Cumberland, and Tennessee rivers:—These will be more particularly mentioned as we go on with directions for navigating the Ohio.

The fish of the Ohio are numerous and of various kinds: the black and yellow cat, weighing from 3 to 100 pounds; the buffaloe, from 5 to 30 pounds; the pike from 4 to 15 pounds; the sturgeon from 4 to 40; the perch from 3 to 12 pounds; the sucker from 1 to 6 pounds; a few herrings sometimes caught, and in the spring of 1805, several shad were caught and sold in the Pittsburgh market, weighing about two pounds; eels and soft shelled turtles are sometimes caught.—These ascend the Allegheny and Monongahela rivers, and their principal branches, and are caught in seines, baskets, pots, and with trot-lines, hooks and lines, &c. The different species of the wild duck are numerous, and a few geese, brant, &c. are seen on the river, and the swan has sometimes been seen stemming the current. Turkies, pheasant and partridges, are numerous on its banks; these, with the opportunity of sometimes shooting bears and deer swimming across the river, afford much pleasure to the navigator, and form sumptuous meals to the boat's crew. Boats, to take advantage of this profitable amusement, are generally well provided with ammunition and fire-arms.

The principal articles constituting loading for the boats trading on the Ohio and Mississippi, are; flour, whiskey, apples, cider, peach and apple brandy, bar iron and castings, tin and copper wares, glass, cabinet work, windsor chairs, mill stones, grind stones, nails, &c. &c. And the principal articles brought up the Ohio in keel boats, are, cotton, lead, furs and peltry, and hemp and tobacco from Kentucky This traffick is carried on briskly at this time, and no doubt a few years will greatly increase it, and much to the advantage of the adventurers.

Exclusive of the trading boats, there are many loaded altogether with merchandise of foreign importation, destined to Kentucky, Tennessee, Ohio and the territories. Many others are family boats, seeking places of settlement in these new countries, where their posterity may rest in safety, having plenty of all the necessaries, and many of the luxuries of life, where their children's children may enjoy the rich and prolifick productions of the land, without an over degree of toil or labour, where the climate is mild and the air salubrious,* where each man is a prince in his own kingdom, and may without molestation, enjoy the frugal fare of his humble cot; where the clashing and terrifick sounds of war are not heard; where tyrants that desolate the earth dwell not; where man, simple man, is left to the guidance of his own will, subject only to laws of his own making, fraught with mildness, operating equally just on all, and by all protected and willingly obeyed.

The hills on both sides of the Ohio, as low as Grave creek, below Wheeling, are filled with excellent coal.† Below this, coal grows scarce, and what is found, is not of so good a quality. Coal has been boated down from Grave creek to Marietta, Limestone, falls of the Ohio, &c. where it sells for 12 cents per bushel. Even at this price, it is not a very advantageous article of trade.

* The following observations on the soil and climate are taken from the Journal of a col. Gordon, who passed down the Ohio as early as 1760.—"The country on the Ohio, &c. is every where pleasant, with large level spots of rich land, remarkably healthy. One general remark of this nature may serve for the whole tract of the globe, comprehended between the western skirts of the Allegheny mountains, beginning at Fort Ligonier, thence bearing southwesterly to the distance of 500 miles opposite to the Ohio falls, then crossing them northerly to the heads of the rivers that empty themselves into the Ohio; then east along the ridge that separates the Lakes and Ohio streams to French-creek, which is opposite to the above mentioned Fort Ligonier, northerly—This country, may from a proper knowledge, be affirmed to be the most healthy, the most pleasant, the most commodious and most fertile spot of earth, known to European people" *Hutchins.*

† A coal mine was opened in the year 1760, opposite to Fort Pitt on the Monongahela, for the use of that garrison. *ibid.*

'lls of the Allegheny and Monongahela rivers, o filled with good coal mines up to their head ; and in some places valuable iron ores are d in them.

ne lands of the Ohio, and its branches, are differ- tly timbered according to their quality and situation. The high and dry lands are covered with red, white and black oak, hickory, walnut, red and white mulberry, ash, poplar, dogwood, some yellow pine, cucumber tree, sassafras, chesnut, and patches of grape vines are sometimes to be found on the south side of the hills. The low and bottom lands produce butter-nut, tulip tree, papaw, black willow, locust, honey-locust, buckeye, cherry, mulberry, beech, elm, aspen, maple or sugar-tree, plum tree, hickory, walnut, grape vine, remarkably large, spice wood, black alder, &c. And below or southwardly of the Falls, are several cedar and cypress swamps, where the cedar and cypress trees grow remarkably large, and where also are great abundance of canes, such as grow in South Carolina, and on the Mississippi.

The *Sycamore* seems to be the king of the forest on the banks of the Ohio. Their monstrous growth, towering height, and extended branches really fill the beholder with awe and astonishment. Between Wheeling and Marietta I measured several from 10 to 16 feet over, four feet above ground, and this seems to be but their common size. A gentleman of Marietta told me he knew of one 60 feet in circumference, and that in the hollow of another he had turned himself around with a ten feet pole in his hands, sweeping it at right angles with himself. And there is one of these huge trees in Scioto county, Ohio, on the land of a Mr. Abraham Miller, into whose hollow thirteen men rode on horse back, June 6, 1808, the fourteenth did not enter, his horse being skittish and too fearful to advance into so curious an apartment, but there was room enough for two more.

In the fall of the leaf, and when the year's growth of bark begins to peal off these trees, the rays of the

bright moon playing through their white br[illegible]es, form a scene uncommonly brilliant, and quite c[illegible]ng and amusing to the nightly traveller.

The growth of the grape vines on the banks of the Ohio astonish the beholder not less than that of the sycamores. It is not uncommon to find them measure from seven to eleven inches over, and so numerous that in many places for 250 yards in circuit they form a complete canopy or covering of a great body and thickness, in which the tops of the trees are left in the entwining branches and umbrageous vine leaves. The number and manner of their hanging 60 or 80 feet from the tops of the tallest trees without touching the trunk, rather puzzles the spectator how they could thus fix themselves. A sailor might say they were first planted in the tops of the trees, as he first fastens his ropes to the mast head, and then grew downwards and fastened in the ground at their leisure; they have this appearance, but the principle does not answer the order of nature.

There is now on foot a new mode of navigating our western waters, particularly the Ohio and Mississippi rivers. This is with boats propelled by the power of steam. This plan has been carried into successful operation on the Hudson river at New York, and on the Delaware between New Castle and Burlington.—It has been stated that the one on the Hudson goes at the rate of four miles an hour against wind and tide on her route between New York and Albany, and frequently with 500 passengers on board. From these successful experiments there can be but little doubt of the plan succeeding on our western waters, and proving of immense advantage to the commerce of our country. A Mr. Rosewalt, a gentlemen of enterprise, and who is acting it is said in conjunction with Messrs. Fulton and Livingston of New York, has a boat of this kind now on the stocks at Pittsburgh, of 138 feet keel, calculated for 300 or 400 tons burden. And there is one building at Frankfort, Kentucky, by citizens who no doubt will push the enterprise. It will

sight, and as pleasing as novel to see a huge pet working her way up the windings of the Ohio, This [illegible] appearance of sail, oar, pole, or any manual thi[illegible]her—moving within the secrets of her own bo[illegible]mechanism, and propelled by power undisbri[illegible]—This plan if it succeeds, must open to r[illegible]ttering prospects to an immense country, an [illegible] of not less than two thousand miles of as fine soil and climate, as the world can produce, and to a people worthy of all the advantages that nature and art can give them, a people the more meritorious because they know how to sustain peace and live independent, among the crushing of empires, the falling of kings, the slaughter and bloodshed of millions, and the tumult, corruption and tyranny of all the world beside. The immensity of country we have yet to settle, the vast riches of the bowels of the earth, the unexampled advantages of our water courses, which wind without interruption for thousands of miles, the numerous sources of trade and wealth opening to the enterprising and industrious citizens, are reflections that must rouse the most dull and stupid. Indeed the very appearance of the placid and unbroken surface of the Ohio invite to trade and enterprise, and from the canoe, which the adventurer manages with a single pole or paddle, he advances to a small square ark boat, which he loads at the head waters with various wares, liquors, fruits, dry goods and small groceries, and starts his bark for the river traffic, stopping at every town and village to accommodate the inhabitants with the best of his cargo.—This voyage performed, which generally occupies three months, and the ark sold for half its first cost, the trader returns doubly invigorated, and enabled to enlarge his vessel and cargo, he sets out again; this is repeated, until perhaps getting tired of this mode of merchandising, he sets himself down in some town or village as a wholesale merchant, druggist or apothecary, practising physician or lawyer, or something else, that renders himself respectable in the eyes of his neighbours, where he lives amidst

wealth and comforts the remainder of his days—no it by any known that his fortune was found paddling of a canoe, or trafficking in ap royal and peach brandy, whiskey, &c. &c. &c. the canoe, we now see ships of two or three hu tuns burden, masted and rigged, descending Ohio, laden with the products of the country, to New Orleans, thence to any part of the world.— Thus the rise and progress of the trade and the trader on the western waters, thus the progress of our country from infancy to manhood, and thus the flattering prospects of its future greatness through the channels of the Ohio and Mississippi rivers.

INSTRUCTIONS AND PRECAUTIONS, NECESSARY TO BE ATTENDED TO BY STRANGERS AND OTHERS ABOUT DESCENDING THE OHIO RIVER.

THE first thing to be attended to by emigrants or traders wanting to descend the river, is to procure a boat, to be ready so as to take advantage of the times of flood, and to be careful that the boat be a good one: For many of the accidents that happen in navigating the Ohio, are owing to the unpardonable carelessness or penuriousness of the boat builders, who will frequently slight their work, or make their boats of injured plank;* in either case, putting the lives and pro-

* We were in hopes that these observations were no longer necessary, but a recent circumstance proves their truth and applicability: Some time in the last of October or beginning of November, 1807, a Mr. Winchester's boat struck a rock a few miles below Pittsburgh, and one of the bottom planks being stove in, the boat sunk immediately; and the loading consisting of dry goods, was materially injured, to the amount of several thousand dollars. The proprietor, not being with the boat at the time, immediately, on his hearing of the accident, conceived that it must have arisen from the carelesness of the person to whom he had entrusted the care of the boat and cargo; and in consequence, brought suit

rties of a great many people at manifest hazard.—— egregious piece of misconduct, should long before ame have been rectified, by the appointment of t-inspectors at the different places, where boats are t. But as this has never been done, it behoves eve- y purchaser of a Kentucky boat, which is the sort here alluded to, to get it narrowly examined before the embarkation, by persons who are well acquainted with the strength and form of a boat suitable for a voyage of this kind.

The principal places where families and merchants stop to prepare for embarkation, are Brownsville, (or Redstone) Pittsburgh, and Wheeling. There are people in each of those places that make it their business to accommodate strangers descending the river with every article they may want, either in provisions, farming utensils, boats, or other crafts, &c. at a cheap and reasonable price. There are large boat-yards at each of these places, and their boats are generally well made and strong, the price of which varies according to their make, length, and strength; one convenient for a family, between 30 and forty feet in length, costs from one dollar to one dollar and twenty-five cents per foot, making perhaps 35 dollars for a comfortable family boat, well boarded up on the sides, and roofed to within seven or eight feet of the bow; exclusive of this expense, is the price of a cable, pump, and fire place, perhaps ten dollars more. Boats may also be had sometimes at New Geneva, Williamsport, Elizabethtown, and M'Keesport on the Monongahela; and at some places on the Youghiogheny river; also at the mouth of Big Beaver, and Charlestown, on the Ohio, and perhaps a few other places. The Allegheny is now beginning to furnish boats, which descend that river in high water

against the man for damages. The man however to prove his innocence, produced before the justice of the peace, (Doctor Richardson, of Pittsburgh, since deceased,) the broken plank, which proved to be rotten in the part where it was broken; and the justice discharged him as not being culpable for damages in this case.

loaded with salt, boards, and lumber, and sell at Pittsburgh generally at a reduced price.

The number of embarkations, and their conveniences, which take place at Brownsville, Pittsburgh, and Wheeling, depend much on the different stages of the water in the different seasons: The first place is about 10 miles the nearest point to the western waters from the eastward; and when the waters will suit, it saves length of road to take water there:—but the waters must be pretty well up to make embarkation safe at Brownsville; therefore stopping there when the waters are really low, is attended with much loss of time, and of course, expense.—Boats can go from Pittsburgh at a much lower stage of the water than they can from Brownsville; yet there are periods, and these generally happen from about the middle of July until the beginning of October, when embarkation at either place would be attended with considerable detention. Wheeling, therefore, is the safest point to strike at in very low stages of the water, and from thence boats may go at all seasons of the year. It is about 58 miles by land from Brownsville. Pittsburgh is preferred as a place of embarkation to Wheeling, when boats can descend from it, for two reasons: first, it is about 45 miles nearer to Philadelphia or Baltimore; and secondly, merchants and travellers say they are better accommodated here with storage for their goods, and all other conveniencies which they may stand in need of, than they could be at Wheeling; therefore, they seldom go there, except in cases of very low water, embarking either at Brownsville or Pittsburgh. But families wishing to cross the Ohio, with their wagons, generally cross at Wheeling, Charlestown, Georgetown, and Big Beaver, according to the direction of the country they are about to remove to. Those destined to the country N. W. of the Allegheny river, and on lake Erie, and bordering the boundary between Pennsylvania and Ohio, generally cross the Allegheny at Pittsburgh.

The best seasons for navigating the Ohio, are in

spring and autumn. The spring season commences at the breaking up of the ice, which generally happens about the middle of February, and continues good for about three months and sometimes four. The fall season generally commences in October, and continues good until about the first of December, and sometimes all through that month; when the ice begins to form and the river close. But the seasons of high water can scarcely be called periodical, as they vary considerably, according to the wetness or dryness of the season, or earliness or lateness of the setting in, or breaking up of winter.

But freshes in the rivers are not entirely confined to the spring and fall; heavy rains frequently happen, during the summer months, in the mountains, and at the sources of the Allegheny and Monongahela rivers, which give a sufficiency of water to render the navigation of the Ohio perfectly eligible. Those freshes however are not to be depended on, and when they occur, must be taken immediate advantage of, as the waters subside rapidly.

When provided with a good boat, and strong cable of at least 40 feet long, there is little danger in descending the Ohio in high freshes, when proper care is taken, unless at such times as when the river is full of floating ice. In this case it is safest to permit your boat to have pretty much her own way, as rowing may tend to throw you out of the current or on the points of islands, before you are aware of it; in which case nothing but presence of mind and great exertions will save you. Therefore prevent yourself being caught on the river among floating ice if possible, unless indeed, when it is very thin and thawing very fast; and even in this case, it would be better to detain until the river is clear of ice.

As frequent landing is attended with considerable loss of time and some hazard, you should contrive to land as seldom as possible; you need not even lie by at night, provided you trust to the current, and keep a good look out: If you have moon light so much the

better. When you come to, the strength of your cable is a great safeguard. A quantity of fuel, and other necessaries should be laid in at once, and every boat ought to have a canoe or skiff along side, to send on shore, when necessary, or as a relief in case of accident.

Although the labour of navigating the Ohio in times of high water is very inconsiderable to what it is when it is low, when continual rowing is necessary, it is always best to keep a good look out, and be strong handed. The wind will sometimes drive you too near the points of islands, or on projecting parts of the main shore, or into a bend where there is but little current, in either case considerable exertions are necessary to get you under way again, and keep you clear of danger either on the one side or the other. You will frequently meet with head winds, the river being so very crooked as that which is in your favour one hour, may be directly against you the next; and when contrary winds contend with a strong current, it is attended with considerable inconvenience, and requires careful and circumspect management, or you may be driven on shore in spite of all your efforts. One favourable circumstance is that the wind commonly abates about sunset, particularly in summer.

Boats, have frequently passed from Pittsburgh to the mouth of the Ohio in 15 days in high water; but in general, 10 days to the falls is reckoned a quick passage; but sometimes a boat will be 2 weeks in going to Limestone, and in a very low state of the water, 20 days.

One other precaution perhaps is necessary in case you are on the river in time of ice, which above all other seasons is certainly the most perilous:—If at any time you are obliged to bring to on account of ice, great circumspection should be used in the choice of a place to lie in. There are many places where the shore projecting to a point, throws off the cakes of ice towards the middle of the river, and forms a kind of harbour below. By bringing to in such a situation, and fixing your canoe above the boat, with one end strongly tied to the shore, and the other out in the

stream sloping downwards, so as to drive off the cakes of ice, which would otherwise accumulate, and tend to sink or drive your boat from her moorings, you may lie with a tolerable degree of safety.

This is a much better way than that of felling a tree above the boat so as to fall partly into the river; for if the tree does not strongly adhere to the stump, ten to one but the masses of ice carry it down against your boat, and put you in eminent danger, much worse than if the precaution had not been taken.

The reflection here naturally occurs, how easy it would be, and how trifling the expense, in different places on the river where boats are accustomed to land, to project a sort of pier into the river, inclining downwards, which would at all times ensure a safe mooring below. The expenses of such erections would soon be repaid by the place becoming famous for a safe and convenient stopping place for boats.

The best mode perhaps in descending the Ohio, in time of low water, is in keel boats. These seem to be more at immediate command in navigating the river; and as they are always strongly manned, they go with greater expedition. They draw little water and require but a narrow channel. Merchants are beginning to prefer this method for safety and expedition; and instead of purchasing boats and taking charge of them themselves, they get their goods freighted down from Pittsburgh in keel boats by the persons who make them, and who make it their business to be prepared, with good boats and experienced hands, for such engagements.

This method is the safest, if not the cheapest, for this special reason: the cargo is consigned to the care of an experienced and careful man, who perhaps descends and ascends the river twice or thrice in the course of one season, and of course must be well acquainted with all the difficulties in navigating it.—On the contrary, when merchants are young, and inexperienced, they do not, often enough, as the Scotch phrase goes, "*Look before they loup.*" They being flushed with

the idea of a fortune before them, hastily buy a boat, load, jump into it themselves, fly to the steering oar, and halloo to the hands to *pull out*.—Now swimming in good water, and unapprehensive of the bad, they think themselves safe, until alarmed by the rumbling of the boat on a ripple, or shoving herself into the mud on a sand-bar.—And until now they believed themselves from having gone down the river once or twice, to have been master navigators, and capable of conducting a ship of 400 tons with equal ease and safety as a common Indian canoe.—Such are the mistaken calculations of the extent of our own knowledge and abilities.—And in common life, it does not unfrequently happen, that we run our ship aground, when we think she has most water to ride in.

As the trimming your boat, that is, loading her in such a manner as to draw an equal depth of water all around, is of considerable consequence to her safety, you ought to be careful to have it done before departure with a circumspect eye. For though the construction of our boats does not render them liable to overset, yet when loaded irregularly, and one corner sunken more than another, a stroke on a rock, or a log, on the diagonal corner, subjects her to fill in that quarter much sooner than if properly trimmed.

There is another precaution which ought not to be neglected; that is, to see that your boat is kept afloat while loading, and when you bring to over night; for if the cable corner should rest on the shore, and during the night, the river should fall much, ten to one but before morning your boat would be filled with water. From a neglect of this kind I have seen a valuable cargo of dry goods sunk and much injured, before the boat was completely loaded.

The caulking of a boat ought to be well attended to before embarkation; for if she has been long built, her timbers and plank may have shrunk, and the caulking got loose. Boats are seldom caulked above the gunnel joint. I think, this a great error, and an unsafe finishing. The next joint at least ought to be well

caulked all around. And for fear of accident, it would be well that every boat was furnished with a few pounds of oakum, together with a mallet and caulking iron. These precautionary provisions might sometimes be the means of saving in part, if not in whole, a loading worth many thousand dollars. For the greater part of the accidents that happen on the Ohio, arise from a want of a proper knowledge of the means that ought to be taken to prevent them.—Some indeed, possessing the knowledge, unpardonably neglect their duty, until sad experience puts them in mind of it, by a loss which perhaps they are little able to bear.

Having given some general and preparatory instructions, which we presume will be found useful if attended to, and a cursory view of the rivers, we now commence the more particular directions how to navigate them. The distances from place to place, except those marked (M. D.) *not having been ascertained from actual survey, may not in all cases be found absolutely correct, yet it is hoped they will not be found so materially erroneous, as to militate against the utility of the work.*

OF THE MONONGAHELA.

ITS CHANNELS, SHOALS, RIPPLES, SAND-BARS, TOWNS, &c.

	MILES.	
CLARKSBURGH, Stands on the E. side of the river, 40 miles S. E. of Morgantown, is the chief town of Harrison county, Virginia, and contains about 50 houses, a court-house and jail. From this to Morgantown the navigation of the river is very difficult in low water, and can be gone only in small crafts.		
MORGANTOWN,	40	40

Is situated on the E. side of the river, the capital of Monongalia county, Virginia, contains about 60 dwellings, a court-house, and stone jail. It is 303 miles from Philadelphia, and above 63 by land above Pittsburgh.

Boundary between Penn. and Vir.	4	44
Cheat river enters on the east side,	4	48

Four miles below the boundary between Pennsylvania and Virginia. At the mouth of this river is a long and ugly shoal and the channel somewhat difficult. Here a person can be got to pilot you past the danger.

This river rises in Randolph Co. Virginia, on the N. W. side of the Allegheny mountains, is about 200 yards wide at its mouth, and has some valuable mills and iron works on it.—Dunkard's settlement is 50 miles up it, to which it is navigable for small crafts. There is a portage of 37 miles from Cheat to the Potomack at the mouth of Savage river.

Dunkard's Creek, west or left side,	2	50

Here is a shoal but not very difficult.

George's Creek, East or right hand side,	10	60

Just below the mouth of this creek lies

NEW GENEVA,

A small village, which had in its vicinity a valuable factury of glass, erected by Albert Gallatin, esq. It is now removed to the Greensburgh side, and carried on by messrs. Nicholson & Co. This town is in Fayette Co. 14 miles S. W. of Uniontown, and a little below it on the opposite side of the river, stands

GREENSBURGH,

A small village in Greene Co. Pa.

Big Whitley Creek, left hand side,	4	64
Little Whitley, same side.	2	66

Channel near the middle of the river.

Brown's run E. side, ch. middle of the river.	2	68
Middle run, E. side, ch. near the W. shore.	2	70
Cat's run, ch. middle of the river.	2	72

Muddy creek, west side,	4	76
Here are two old fish dams, the channel of the first is near the middle, and of the other near the east side.		
Ten mile creek, west side,	7	83
Channel, a chute in the middle of the river. On this creek, are iron works, grist and saw mills, and it runs through a well settled country of rich farmers, principally from New Jersey.		
FREDERICKTOWN.	1	84
This is a small village; stands on the west side of the river, Washington Co. Pa. contains two mercantile stores, and a publick library, instituted principally by Quakers.—Within a few miles is a large brewery and distillery, and tanyard.		
" About a mile below Fredericktown is a curious cave called the *Panther's Den.*—It enters the hill about half way from its base, by a small fracture or rent in the rock.—After going a few yards through a narrow and descending passage, you enter a wide but low room, in which you can walk nearly upright—To the roof of this room we found bats hanging in a stupid kind of sleep—The next room we got into by clambering up another fracture in the rock—this room we had to roll ourselves through, and entered a third, by a narrow and descending passage, occasioned by another rent in the rock—This room was extensive, and high enough to walk upright in, and was nicely divided by a partition of petrifactions, formed by the drippings of the water through the roof.—The formation of these petrifactions, had a singular appearance, something similar in shape to two hay-stacks with their conick tops put one on top of the other.—We had gone crouching, pushing and rolling ourselves through this fractured hill about 40 yards—feeling tired we returned with candles and cord to the mouth again in safety.—The		

first room had sufficient marks of animals bones to entitle it to the name it bears."

James Crawford's ripple, 1 85

Channel near the middle of the river.

Josiah Crawford's ripple. 3 88

Channel near the middle of the river.

Dunlap's Creek, east or right hand side, 3 91

Here has been a fish dam—the chute is near the middle of the river. Immediately above the mouth of this creek stands BRIDGEPORT, a small village, divided from Brownsville by a chain bridge over the creek. In it are several mercantile stores, an earthern pottery, tanyard, a wire weaver, card maker, hatters, a boat yard, and a market house. It contains 56 dwellings.

BROWNSVILLE, (or REDSTONE.)

Lies immediately below Dunlap's creek, on the east side of the river, finely situated on a first and high second bank. It contains about 120 houses, principally of wood, some handsomely built with stone and brick; a market house, an episcopal church, 18 mercantile stores, two tanyards, a rope walk, two boat yards, two tin and copper manufacturies, two facturies of nails, one printing office, which issues a weekly paper, a post office, a ware house, one scythe and sickle maker, blacksmiths, silversmiths, (one of whom makes surveyor's compasses,) taylors, shoemakers, saddlers, &c. &c. Within a few miles of the town are four Friends' meeting houses, 26 grist, saw, oil and fulling mills, and within four miles up Redstone creek, a valuable paper mill, owned by Samuel Jackson Byrd's fort formerly stood here.

The inhabitants of Brownsville are remarkably industrious, and the settlement around the town, is the oldest and richest in the western country, and is principally settled by quakers. This being a place of considerable embarkation, individuals make it their business to supply travellers with boats and all other necessaries for descending the river. It is in Fayette

Co. Pa. and 12 miles N. W. from Uniontown, the seat of justice for that county; 33 miles S. E. of Pittsburgh, 290 west of Philadelphia, and 25 E. of Washington, Pa. in N. lat. 39. 58. W. long. 81. 12 ½.

Near this place are rocks containing curious carvings, the hills abound with excellent coal, the river with fish, and there has been lately erected several wool carding machines in its vicinity.

In digging a cellar lately for a necessary in the town, there was found in a kind of box coffin a human skeleton. The coffin was found standing nearly erect, the boards much decayed; no doubt deposited here during the wars between the Indians and the white people, at the early periods of the first settlement of the country.

There has been built lately on the town side, a valuable grist and saw mill, turned by the water of the river, in which are wool and cotton carding machines. The mills are owned by Messrs. Gillispie and Clark, who got an act of assembly passed to throw a dam across the river, by engaging to make a safe way for the passing and repassing of boats up and down the river. This was at first done by a chute in the dam, and since by a lock canal.

A chain bridge is now about to be thrown over the river at Brownsville, which will add much facility and safety in crossing. It is to be on the plan of Judge Finley's invention, and erected under the direction of managers appointed by a law of the state. We hope it will succeed better than those have at Pittsburgh, for they appear to have fallen, or rather they have no appearance of rising. Bridges over our waters, and good roads over the rough places of our hills and hollows is a subject highly worthy of legislaive attention and the industry of the citizens.

A manufactury of steel has been recently established at Brownsville by messrs. Trueman & Co.

1 92

Redstone creek, right hand side,

Channel is near the middle of the river; there being a smart ripple near the mouth of

the creek. On this creek are several valuable saw, grist, and oil mills, one paper mill, and a wool carding machine at its mouth.

Over the mouth of this creek there has been thrown a chain bridge, within the last two years.

Pigeon creek, left or west side, 18 110

Channel in the middle of the river.

WILLIAMSPORT,

Situated on the left bank of the river, just below Pigeon creek, is a growing village, in Washington Co. Pa. 20 miles east of Washington, and about 23 above Pittsburgh.—The inhabitants have been petitioning the legislature for the privilege of forming it into a new county, by taking off a part of Washington, Westmoreland, Fayette, and Allegheny counties, all of which corner near that place. It is said 4000 dollars have been already subscribed to meet part of the expenses of county buildings, &c.

Parkinson's mill, right side, 3 113

Channel in the middle of the river.

M'Farland's ferry, 6 119

ELIZABETHTOWN, 2 121

Is a small village on the right bank of the river in Allegheny county. Here is a boat yard, out of which were launched, the "Monongahela Farmer," and the brig "Ann Jean." The town does not thrive much. Original proprietor, col. Stephen Bayard. It is 18 miles above Pittsburgh.

Peters creek, left bank, 3 124

Here is a small ripple, channel near the west or left hand shore.

M'KEESPORT, 5 129

A small and dull village on the right or east bank, just below the mouth of the Youghiogheny river, in Allegheny county, 12 miles above Pittsburgh. Original proprietor, John M'Kee, who laid it out in 1794. Boats may sometimes be procured here. It has a large brewery, two mercantile stores, a tan and boat yard.

The Youghiogheny is a considerable river, and affords pretty good navigation, except in very low water, for fifty or sixty miles. Passing S W. of the Laurel Hill, it precipitates itself over the Ohiopyle falls, 20 feet perpendicular. It passes through a part of Westmoreland, Fayette and Allegheny counties, and where it discharges itself into the Monongahela, it is about 150 yards broad.—Jacob's creek, on which are Turnbull and Marmie's iron-works, enters the Yough about 35 miles above Pittsburgh.

Turtle creek, 5 134

A town was laid out above the mouth of this creek a few years ago—but it has not progressed. Just at the mouth of this creek is a long and difficult ripple.—Channel, at the head of the ripple, near the right side for a short distance, thence, about the middle of the ripple it runs to the left shore, and returns to the right shore near the foot of the ripple.

Braddock's fields, right bank, 3 137

Here is a ripple, channel right side.

These fields are rendered famous on account of general Braddock's getting defeated here in an engagement with the French and Indians, in the year 1755. Braddock's army was cut all to pieces in a short time; the Indians and French being completely covered by woods, grass, &c. while the English army stood in an open road thick set with grass to receive the continual firing of the enemy, whom they could not even see. Braddock* was mortally wounded, and the late General Washington, then acting volunteer aid de camp under him, was the only aid de camp left alive and not wounded on the field of battle, and he had two horses shot under him, and four bullets passed through his coat.†

* He was conveyed to Dunbar's camp near Uniontown, where he died.

† Ramsay's life of Washington.

These fields are nine miles above Pittsburgh, and the owner‡ frequently ploughs up the bones of those who fell in this dreadful carnage.—It is said that a valuable brass piece may sometimes be seen in a very deep hole in the river opposite the field of battle; the trees on the side of the hill still bear the marks of the balls fired during the engagement.—Braddock's fields are also celebrated on account of their having been a place of general rendezvous for the Whiskey Boys, as they were called, during the Western Insurrection, in the year 1794.

Nine Mile Run, (M'Dowel's)	1	138
Gordon's (now Colhoun's) ferry,	2	140

Channel in the middle of the river.

Four Mile Bar, mouth of Four Mile Run,	3	143

Channel on the right hand side of the river, which from this place, ought to be kept down to

PITTSBURGH,	4	147

Opposite to this town is a sand-bar three quarters of a mile long, nearest the S. or left hand side; it sometimes remains bare for three months; it was ploughed and sowed with buckwheat in the year 1801-2; the grain flowered, but the floods came and swept the crop away before it had time to mature.—The channel is on the town side.

‡ George Wallace, esq.

OF THE ALLEGHENY.

ITS CHANNELS, RIPPLES, ISLANDS, TOWNS, &c.

INCLUDING THE PORTAGE FROM ERIE, (OR PRESQU' ISLE.)

THIS town is handsomely situated on the south bank of lake Erie, opposite the Peninsula, which runs several miles into the lake, forming between it and the town, a handsome harbour for vessels, though it is somewhat difficult to enter. Erie was laid out a few years since (in 1797-8, I think,) by the state of Pennsylvania, and from its commanding situation must in time become a place of considerable business. It is increasing in buildings and business, is the seat of justice for Erie county, in lat. N. 42° 21′ about 120 miles N. of Pittsburgh. The old fort, just below the town, which contains the venerable remains of the late general Anthony Wayne,* (who died here, Dec. 14, 1796, on his return from his campaign against the Indians,) is totally evacuated. The country in its vicinity is settling rapidly; and the trade in salt, of which there are about 7000 or 8000 barrels enter that port annually, is increasing. The convenience of the turnpike road erected between Erie and Waterford, a portage of 15 miles is very considerable.

Erie has a post-office, several mercantile stores, and publick inns, and a number of the mechanical branches are carried on with spirit. The town is well supplied with fish from the lake, and cranberries from the peninsula, of which many barrels are sold at the Pittsburgh market yearly. The advantage that Erie has from the trade of Detroit, and the northern lakes, with that of the St. Laurence and the

* The bones of the hero were removed in Oct. 1809, and interred in the family burying-ground near the Paoli, by Isaac Wayne, esq. The Pennsylvania Society of Cincinnati having appropriated 500 dollars, to erect a monument to his memory, the 4th of July preceding.

Mohawk rivers, added to the easy communications to it from different points of the Ohio, are certainly very great, and must eventually add importance to the place, and riches to the country around it.

The following statement will shew the increase in the article of salt at the port of Erie from 1800 till 1809, as registered by Mr. Foster, collector of that port:

In the year 1800 - - - 723 } barrels of salt
1801 - - - 396 } were entered
1802 - - - 834 } at this port & distributed along the lake in the states of New York, Pennsylvania, and Ohio, and a few barrels sent to Pittsburgh.

In the year 1803 - - - 2736 } barrels of salt
1804 - - - 3778 } were entered at
1805 - - - 7589 } this port for the
1806 - - - 7261 } consumption of
1807 - - - 6774 } this neighbourhood and Pittsburgh market,
1808 - - - 9349 }
1809 - - 14346 }

not including the supplies to the states of New York and Ohio—Making 52,776 barrels, or 263,880 bushels of salt, besides other articles of merchandise, though of less importance, yet to a considerable extent.

District and port of Presqu'Isle, }
collector's office, Dec. 25, 1809. }
THOS. FOSTER, *collector.*

WATERFORD (FORT LE BŒUEF,) 15 15

This town is situated on the north side of French creek, and is the nearest and best point of communication between that creek and Erie; and it is here where goods are deposited to be ready for transportation either over the portage, or down the creek. A frontier post*

* The French had a fort erected here as early as 1751. The English growing jealous of their encroachments on the Ohio, and

was kept here till the peace with the Indians in 1796. It is now destroyed. It has a post office, several mercantile stores, warehouses, publick inns, &c. and is 15 miles S. of Erie, in Erie county.

French creek through Le Bœuf lake,	4	19
Muddy creek,	12	31
Dead water, end of,	14	45
MEADVILLE,	18	63

This town stands on the E. or left hand side of French creek, is the seat of justice for Crawford county Penn. has several mercantile stores, publick inns, a post and printing office, which issues a weekly paper, and from its central situation in the heart of a rich and fertile country, it will no doubt become a place of considerable business. It has a well regulated school, a fixed preacher, and a society for the encouragement of home manufactures. It is about 86 miles north of Pittsburgh.

Wilson's Bend,	6	69
Little Sugar creek,	8	77
Big Sugar creek,	12	89

From this creek there is a considerable rapid down to

FRANKLIN,	4	93

This is the seat of justice for Venango county Penn. situated on the right or W. side of French creek, a little above the junction of it with the Allegheny river. It is bounded by large and stony hills on both sides. It progresses but slowly, and the country around it is but

in order to check their further progress, Mr. Dinwiddie, then colonial governour of Virginia, despatched the late Gen. George Washington, then in the nineteenth year of his age, with a letter of remonstrance to the French commandant, Mons. Le Gardeur De St. Pierre, then at that garrison. On this embassy, Washington set out from Will's creek, now called Fort Cumberland on the Potomack, on the 15th November, 1753. Having delivered his letters, he returned to Williamsburgh, in Virginia, on the 78th day after his departure, a route at that period at once hazardous and fatiguing in the extreme.

Ramsay's Life of Washington.

thinly settled. The French formerly kept a garrison here, which is now destroyed, but is said to have a brass piece of ordnance of considerable value buried in its ruins. It is about 63 miles northward of Pittsburgh.

Sandy creek, west side,	10	103
Scrub grass creek, west side,	8	111
Falling springs,	3	114
Montgomery falls,	4	118

Channel on the left hand side of a large rock in the middle of the river.

Ewalt's defeat,	3	121

This is a very rocky place, channel east side.

Patterson's falls,	4	125
Nicholson's eddy,	2	127

Here is a strong ripple, channel west side.

Stump creek, east side,	8	135

Channel east side.

Parker's or Amberson's falls,	3	138

Channel on the east or left side.

Catfish falls, channel east side,	8	146
Redbank creek, channel east side,	7	153
Cumming's rock, channel west side,	5	158
Mahoning creek, east side,	2	160

Channel west side.

Sloan's ferry,	14	174
Crooked creek, east side,	4	178
Nicholson's falls, channel west side,	3	181
KITTANNING,	7	188

Is a small but thriving village, situated on the east bank of the Allegheny. It is the seat of justice for Armstrong county Penn. about 36 miles N. E. of Pittsburgh.

FREEPORT,

A small village on the west side of the river, at the mouth of Buffaloe creek.

Owing's island, channel west side,	4	192
Bull creek, west side, channel east side,	3	195
Logan's ferry, mouth of Puckety creek,	4	199

Channel on the east side.

Hullard's island, channel east side,	4	203

Plumb creek, east side,	3	206
Sandy creek, east side,	2	208
Here is an island, channel east side.		
Pine creek, west side,	5	213
Wilson's island, channel east or left side,	4	217
PITTSBURGH,	1	218

Here you may land below the wharf on the Allegheny, or turning the point, ascend the Monongahela, and land at any of its wharves. The shores of either river are dry and gravelly, but in high water the Monongahela affords, from the gentleness of its current, the safest harbour, and is the most convenient to the centre of the town.

THE OHIO.

WE now commence the directions for navigating the Ohio river, and as it commences at Pittsburgh, it will not be amiss to preface the more particular account of it, by a short description of that place.

PITTSBURGH,

IS delightfully situated at the head of the Ohio river, on the plain or point of land formed by the junction of the Allegheny and Monongahela rivers; the former running from the north-east, and the latter from the south-west, making an angle where they unite of about 33 degrees. On the point stood the old French garrison known by the name of Fort Du Quesne, which was evacuated and blown up by the French in the campaign of the British under general Forbes* in 1758. The appearance of the ditch and

* This campaign might be said to have been conducted by our late general George Washington. For he was foremost in the expedition, though but in his 26th year—and it was he who pointed out the necessity, and urged the reduction of this fort, as the only safeguard to the frontiers of Virginia, from the repeated and murderous incursions of the French and Indians.

Ramsay's Life of Washington.

mound, with its salient angles and bastions are still to be seen.

On the margin of the Allegheny and near to the old fort once stood a row of houses, tolerably elegant and neat, but have been swept away in the course of time, some by the encroachments of the floods, and others were torn down for the purpose of forming an opening to the river from the garrison. Not a trace of those buildings now remain, except some of the stones used in their foundation, which may yet be seen jutting out of the bank as the earth caves into the river.—"Those who 40 years ago, saw them flourish, can only say here they stood."

There stood at the point, as late as 1784, a large umbrageous tree—its fate too has been unfortunate—the floods undermined the ground and it was swept away.

On part of this ground now stands a large brewery, and two dwellings; the situation is too low indeed for a general building, and the bank too subject to cavings. Just above Fort Du Quesne, is the remains of the garrison built by general Stanwix, called Fort Pitt, after the late earl of Chatham, and is said to have cost the British nation £60,000 sterling, about $266,666. 66. The bricks which composed the walls of this garrison, have been applied to building houses, which are distinguishable from the rest of the brick houses in town by the whiteness of the colour impressed on them by the strength of the lime and cement used in their first application.

Within the embankment are still some of its barracks and a strong stone powder magazine, the only remains of the British buildings; there are also a few dwellings built within three or four years.—The British officers, commanding this garrison, had, on the bank of the Allegheny, most elegant gardens, called the King's and Artillery gardens; near to these they planted an orchard of excellent bearing apple trees, some of which still bear fruit, others have been swept away by the surly floods of the river, and others cut down to give room for building.

Fort Pitt, being included in one of the manors of the Penn family, was sold by the proprietaries, and now makes a part of the town of Pittsburgh, though its banks and ditches form a considerable obstruction to its being regularly built on, and very much spoil the beauty of the view from the head of Liberty and Penn streets to the Monongahela river.

Fort Fayette, the present garrison, built in the year 1792, is also within the borough, and stands on the Allegheny river. It answers as a place of deposit, and for the convenience of stationing soldiers destined down the Ohio and Mississippi; as a place of defence it is useless.

In the year 1760, a small town, called Pittsburgh, was built near Fort Pitt, and about 200 families resided in it; but upon the Indian war breaking out in May 1763, they abandoned their houses and retired into the fort.†

The bottom or plain on which Pittsburgh stands, would seem, from circumstances to have been *made ground*, and the Allegheny river to have once washed the base of Grant's hill;* but through time and accident,

† Hutchin's Topographical Description of Pennsylvania, &c.

* *Grant's* hill comes to a handsome point within the limits of the borough, eastward of the town. From it you have a beautiful view of the town and the three rivers. On its summit is a mound or antient burying place of the Indians, which is now enclosed in the middle of a fine garden, and has an elegant summer house on the top of it.—This seat which is among the handsomest of the place, formerly belonged to, and was first improved by Mr. Marie, a French gentleman. He sold it to James Ross, esq. its present proprietor.—This hill takes its name from general Grant who met with a defeat here by the Indians and French, in the war which ended in 1763.—Grant thinking his conquest sure, imprudently beat the *reveille* to the French garrison at sunrise. But before he was aware of it, the garrison dividing itself into two parties, cautiously sallied out under the banks of the two rivers, and joining on the back of Grant, came down upon him like a torrent, took Grant himself prisoner, and cut and tomahawked his troops, which consisted of 800 Caledonians, or Highland Scotch, all to pieces in a few minutes. The hill was then covered with wood and thick bushes, which added to the confusion of Grant, and to his easy defeat, he not being accustomed to fight in the *In-*

found its way by small progressions, from that hill to its present bed. There are two rises, or what are called *first* and *second banks*, running parallel with that river, which would seem to have once formed its eastern margin. These elevations make beautiful situations for either gardens or buildings.—In digging wells in the town, the various kinds of sand and gravel are found as appear on the beaches and in the beds of the rivers, pieces of wood and strata of dirt and leaves are also frequently discovered eight or ten feet below the surface. The Allegheny is now working itself back again. It has washed away about 50 or 60 feet of ground on its eastern bank within 30 years.

This plain which is of a rich sandy loam, is about half a mile in width from the Allegheny to the point of Grant's hill, its widest part; thence up that river it gets narrower, until about four miles, where the hill closes to the river bank. But the town may extend as far as the Two Mile run; the bottom that distance is spacious, and well calculated for building on. It is now enclosed in orchards, meadows and grain fields, and produces fine crops of each.

The present town of Pittsburgh was first laid out in the year 1765; it was afterwards laid and surveyed in May, 1784, by col. George Woods, by order of Tench Francis, esq. attorney for John Penn, jun. and John Penn. The beautiful and very commanding situation of the place has increased its buildings, population and business beyond all calculations.

In the year 1800, Pittsburgh contained according to the census of that year, 2,400 souls. The census of 1810, according to the return of William B. Irish, esq. gives a population of 4,740 souls, particularized as follows, together with the number and kinds of dwelling houses:

dian fashion, that is, behind trees, old logs, rocks, &c.—It was the ignorance of this method of fighting, that occasioned the sudden defeat, and dreadful carnage of the troops of general Braddock.

RETURN OF THE No. OF INHABITANTS AND HOUSES IN PITTSBURGH.

	Free white females	*Free white males.*	*Houses.*
Whole No. of stone.—Stables and kitchens excepted.			11
do. brick. do. do. do.			283
do. frame and log. do. do. do.			473
Total No. houses—767.			
Under 10 years of age. - - - - -			751
Of 10 years and under 16. - - - - -			333
Of 16 and under 26, including heads of families.			614
Of 26 and under 45, do. do. do.			513
Of 45 and upwards, do. do. do.			213
Under 10 years of age. - - - - -			699
Of 10 and under 16. - - - - -			355
Of 16 and under 26, including heads of families.			501
Of 26 and under 45, do. do. do.			421
Of 45 and upwards, do. do. do.			156
All other free persons except Indians, not taxed.			184
Total No. Inhabitants—4,740			

The above statements shew our population has doubled itself in ten years, and that it will increase in a ratio proportionate for the next ten years there can be but little doubt. I am of opinion the business of the town has increased much beyond the increase of population, and that there are at least ten and perhaps fifteen times the value or quantity of business done now that there were ten years ago. It would be pleasant could a fair comparison be made, but we want facts to do justice to the subject.

In 1807, the town contained about 500 houses, it now (1810) contains, as before stated, 11 stone dwellings, 283 brick, and 473 frame and log, kitchens and stables excepted, making in all 767, including places of worship, the court-house, jail, &c.

In 1807, the publick buildings of the town were a large and spacious brick court-house and market-house, situated in the publick square or Diamond, having Market street running between them; a stone jail; a bank in west Second street, established Jan. 1, 1804, being a branch of Pennsylvania bank, also of stone; a large four story stone house on the bank of the Monongahela river, built by Oliver and Owen Evans of Philadelphia for a steam grist mill, which was put in operation in the spring of 1809; it is conducted by George Evans (son of Oliver) who is part proprietor; this mill is of great value to the town and the adjacent country, forming a good and sure market at all seasons of the year for vast quantities of wheat, rye, corn, &c. &c. The calculation is, that she is able to grind eight bushels per hour on each pair of stones throughout the twenty-four hours. She has two pair of stones constantly running, but her power of steam is calculated for three pair. The construction and mechanism of this mill do honour to human invention. The two cylindrical boilers, which are quarter inch wrought iron, are 26 feet in length and 27 inches in diameter; these are laid along side of each other in a brick building at the north-east end of the mill; into these cylinders are introduced water through pipes connected to a pump which goes at pleasure by the same power that sets the mill in operation. The water of the boilers are heated by large fires made of stone coal, which is introduced at one end into a grated fire place as long as the cylinders themselves; the quantity of coal consumed daily by these boilers is said to be about twenty bushels, which cost one dollar; three hands are sufficient to attend the mill in its full operation. The running gears of the mill are all of cast iron, of which she has about ten tons about her,

cast at Mr. M'Clurg's air furnace. It is estimated she cost the proprietors between 12 and 14,000 dollars.

The other publick buildings were, a handsome octagon episcopal church, at the point of Liberty and Wood streets; a large and spacious presbyterian meeting house, on the east side of Wood street, and near the church; a church for the covenanters; one for German lutherans, and a Roman chapel at the end of Liberty street, and an academy, all of brick; and a large frame ware house at the corner of Wood and Water streets, built by Mr. Thomas Cromwell.

It is highly probable that Pittsburgh will become, from the many advantages which nature has placed within the grasp of its inhabitants, added to those which may arise from the addition of art, one of the most considerable inland manufacturing towns in the United States. Indeed we can draw at this time a tolerable good picture of our future eminence by a view of the present state, and number of our manufacturies, artists and mechanicks, each pursuing his business in a manner perhaps unparalleled, for vigilance, ingenuity and industry. The following statement of the number of master workmen in each particular branch, with the manufacturies, was taken in the fall of 1807: 1 cotton manufactury*, having a mule of 120 threads, and one spinning Jenny of 40 threads, 4 looms, and a wool carding machine under the same roof; 1 glass works†, on the opposite side of the Monongahela, for green, and one on this side, for white glass‡; 2 breweries, 1 air-furnace§, 4 nail facturies, one of which makes 100 tons of cut and hammered nails annually; 7 coppersmiths, tin-plate workers, and japanners; 1 wire weaving and riddle factury‖; 1 brass foundery, 6 saddlers and harness makers, 2 gunsmiths, 2 tobacconists, 1 bell maker, 3 tallow chandlers, 1 brush maker, 1 trunk maker, 5 coopers, 13 weavers, 10 blue dyers, 1 comb maker, 7 cabinet makers, 1 turner, 6 bakers, 8 butchers, 2 barbers, 6 hat-

* Kerwin, † O'Hara, ‡ Bakewell and Co. § M'Clurg, ‖ Wickersham.

ters, 4 physicians, 2 potteries of earthern ware, 3 straw bonnet makers, 4 plane makers, 6 milliners, 12 mantua makers, 1 stocking weaver, 2 book-binders, 4 house and sign painters, 2 portrait painters, 1 mattras maker, 3 wheelwrights, 5 watch and clock makers and silversmiths, 5 bricklayers, 5 plasterers, 3 stone cutters, 8 boat, barge, and ship builders, 1 pump maker, 1 looking glass maker, 1 lock maker, 7 tanyards, 2 rope walks, 1 spinning wheel maker, 17 blacksmiths, 1 machinist and whitesmith, 1 cutler and tool maker, 32 house carpenters and joiners, 21 boot and shoe makers or cordwainers, 5 windsor chair makers, 13 taylors, 1 breeches maker and skin dresser, 12 schoolmasters, 4 schoolmistresses, 33 taverns or publick inns, 51 mercantile stores, 4 printing offices, 6 brickyards, 3 stone masons, 2 bookstores, 4 lumber yards, 1 maker of machinery for cotton and wool manufacturies,¶, one factury for clay smoking pipes,§§ 1 copper-plate printing press.

Since which and principally within the present year 1810 there have been built one large ware house by Mr. George Anshutz, one do. by Messrs. Wilkins and Robinson, both of brick, the latter on the corner of Wood and Front streets, the former between Front and Water, both on the east side of the street; one do. at the Point, of brick, by Gen. James O'Hara; a brick methodist meeting house, in Front, between Wood and Smithfield streets, an extensive brewery, built on the Monongahela river above Suke's run, and put into operation in the fall of 1809, owned and conducted by Messrs. John Gorman & Co. an air furnace just above the mouth of Suke's run, put into operation Nov. 1810, owned by Mr. Anthony Beelen; a white lead manufactury, a blue frame of three stories, close to the above air furnace, built and owned by Mr. Beelen also; a house erected for the drawing of wire by the power of steam, situated on the Monongahela river, a little above Mr. Gorman's brewery, built and to be conducted by Mr. William Eichbaum, sen. This mill

¶ Eltonhead. §§ Price.

when it gets into operation, will be the only establishment of the kind in the United States. Hence its peculiar and great value to our manufacturing interest throughout the western country, and we hope our eastern brethren beyond the mountains will not fail to be attracted by its evident advantages to that portion of the Union, and the general government also, by shewing a disposition to foster its infant rising.—An attempt of this kind was made in Philadelphia a few years back, it is said by Oliver Evans, but failed for want of a thorough knowledge of the business.—Mr. Eichbaum is a German gentleman of much ingenuity and persevering industry, and served an apprenticeship to the business in his native country, therefore we may calculate with a great degree of certainty on the success of his establishment.

An iron grinding mill was put into operation by Joseph M'Clurg in 1809; a wool carding and spinning machinery was set agoing in the same year by Mr. James Arthurs; we observe a Mr. Benjamin Rammage has advertised himself (Dec. 1810) as having commenced the stocking weaving business in this place; this establishment deserves attention; several of the same business attempted to establish themselves here within the last ten or twelve years, but seemed to have withdrawn from the town for want of encouragement from the citizens. What can a man do with his business, unless encouraged by his neighbours? Is not a stocking, wove in Pittsburgh, as good as one wove in any other part of the world, of the same quality? Will not the same material yield the same warmth, if manufactured equally well? why then pass the door of the Pittsburgh stocking weaver and go or send three hundred or a thousand miles for a pair of stockings not a whit better than his? why encourage a manufacturer five hundred or five thousand miles hence, in preference to him who seats himself down at your own door, in full confidence that you will encourage him in his useful calling; and whose numerous children and the happiness and comforts of his

family are solely depending on the success of his honest labours? No man, I will venture to say, who pretends to reflect honestly and seriously, five minutes in the twenty-four hours, will give the preference to the former. Yet my neighbour John Nokes cannot sell his goods unless he puts the London stamp* upon them. The stocking weaver's case is by no means singular—hundreds of other honest men's goods lie dead stock on their hands, while those of a *foreign* manufacture, of the same kind, go off rapidly, and the reason is, they have more gloss and shew on their external surface, but not half the strength and durability.

A white flint glass house was established by Mr. George Robinson, in 1809, on the bank of the Monongahela between Smithfield and Grant streets; it is of brick, of the sugar loaf form; this is the third already in operation, all doing well, and there seems a want for a fourth, if we may judge of the difficulty of getting a supply of window glass.

In the year 1808, Mr. William Eichbaum, sen. established the glass-cutting business, the only establishment of the kind in the United States: He manufactures elegant chandeliers, and his cut glass is equal to any we see imported.

The manufacturing of marble paper has been recently commenced, and of a superior quality. The making of black ink-powder has been attempted but we know not to what extent. An extensive button manufactury was established by Mr. Reuben Neale, 1808, and has increased beyond his most sanguine expectations.

The establishment of Messrs. Stackhouse and Rogers as steam engineers, is among the most valuable establishments in town. The steam power is a ve-

* A case of this kind occurred lately at New York: A merchant had made a considerable purchase of domestick manufactured hats: with all the usual persuasive arts of trade, he found they would not sell; they remained on hand too long: What must be done? The "*London Stamp*," said he, will do the business: the London stamp was clapped on them, and the hats went off in a hurry.—So much for the want of discernment, and a true spirit of honest patriotism.

ry important one, and must become in a few years very generally made use of throughout this country and Kentucky, where the water courses are but few, and the greater part of these run dry during the summer months. It was Messrs. Stackhouse and Rogers who built the engine for the Pittsburgh steam mill; and Oliver Evans of Philadelpeia, speaks of them as characters in whom the utmost confidence may be put, and as men not excelled by any in the United States for ingenuity, industry, and probity. They have commenced the making of screws for butt hinges, and have succeeded beyond their expectations.

Snuff and cigars are manufactured in Pittsburgh to a very considerable amount; Mr. George Sutton has a snuff mill in operation, and Messrs. Peter Magnien & Co. have lately established an extensive manufactury of snuff, cigars, and spun tobacco: as a beginning they have laid in an hundred hogsheads of tobacco. Mr. William Blair has lately established the brush making business, and nothing is wanting to make his trade prosper but a supply of hogs' bristles; there are certainly enough of these in the country, if people would be careful enough to save them: farmers and the killers of hogs ought to hold in mind, that "*a penny saved is two pence earned*," a dollar's worth of hogs' bristles is as good as a dollar's worth of whiskey, wheat, or any thing else brought to market. From the quantity of hogs raised in the state of Ohio, we should suppose there could be no lacking in a supply of bristles—about 40,000 of these animals have been drove from that state the present season, (1810) to the Baltimore and Philadelphia markets.

The manufacture of ironmongery has increased in this place beyond calculation. Cut and wrought nails of all sizes are made in vast quantities, about, we think, 200 tons per year. Fire shovels, tongs, drawing knives, hatchets, two feet squares, augers, chissels, adzes, axes, claw hammers, door hinges, chains, hackles, locks, door handles, spinning wheel irons, plough irons, flat-irons, &c. tons of these together with a num-

ber of other articles in the iron way are exported annually. Abner Updegraff attempted the making of *files*, which he finds he can do to advantage. He also makes gimblets, and by way of experiment, made a neat penknife, which he says could be made here as cheap as those imported—He is a white smith of much ingenuity and great industry, the excellency of his hackles, and his edge tools have already acquired a name of superiority. Mr. James Tustin, an ingenious white smith and machinist, confines himself pretty much to the manufacturing of ironmongery, and he is now engaged in making the necessary engines for the steam boat building by Rosewalt, Livingston and Fulton. Indeed the whole of our smiths do not want for ingenuity and industry, and it is with them, as it ought to be with all honest industrious men, they work hard, and are making fortunes as a recompence.

There are two or three whiskey distilleries in town. We cannot say any thing in praise of these, or any thing else which tends to *impoverish the purse and the constitution*, at the same time, and which frequently puts men in a state of character below that of the brutes. Whiskey, as a medicine, is good, that is, to take it only when the system requires it, and no more than is sufficient to perform the part of a gentle stimulant: but to drink it as is now universally practised, is destructive of health, strength, morals, religion, and honesty; and is a serious national calamity, in which man sinks in the estimation of himself, and becomes an abhorrence in the eyes of God.

Mr. William Price has attempted the making of *delf* ware, and has produced some handsome specimens—He feels confident of success, in which case if conducted largely, this would be a most valuable business.—That we have suitable clay, there can be but little doubt, and nothing seems wanting, but persevering research, a thorough knowledge of the art, and capital, to make this one of the most yielding manufactures that at present could be established in this country. It would indeed be something handsome could

we stop those hundreds, nay thousands of crates of ware from coming over the mountains, in which every man who eats off a plate is taxed one hundred per cent. more for his cutting than he would be were the same article manufactured on the spot. Binny and Ronaldson of Philadelphia have established a considerable manufactury of this kind: I have not a knowledge how they succeed, but one thing I know, they have the flood of importations to contend with, which, with the current of mercantile influence against them, is sufficient to damp the spirits of the most bold and persevering manufacturer, and bring to ruin and dust the most valuable manufactury.

An extentive cotton manufactury was established in 1808, by Messrs. Scott* and Armitage, on the Monongahela, above Suke's run. It manufactures excellent cloths, and a variety of handsome kinds, dimities, checks, chambry's, jeans, &c. It has 234 spindles in operation, turned by horse power. This is the second cotton mill already in complete operation, and they both appear to be doing well, for there is no difficulty in selling all they can make, and more in demand. A third, and on a more extensive scale than either, could probably be established to advantage.

But the manufacturing of cotton cloths at this place, does not seem to come so naturally into view as that of woollen. For the latter, we have the raw material growing on the backs of animals, than which a better country cannot be found for raising and improving their breed. And there are eight months in the year of our climate much better calculated for woollen than cotton suits. The Harmony Society in Butler co. Pa. about 25 miles from this place, have established a manufactury of broad cloth from merino wool, which will become extensive. Col. Humphreys of Connecticut, has erected an extensive manufactury of this kind, in which he makes excellent woollen cloths, fine and coarse, and to a good advantage, they yielding

* Mr Scott has since deceased, and the business is now conducted by his widow and Mr. Armitage.

a handsome profit to the manufacturer, and proprietor; and we hope to see ere long some of our enterprising citizens entering into this business, so long neglected, and so much wanted.

Among the numerous articles manufactured for exportation, besides those already enumerated, are, window glass, green bottles, jars, &c. white flint glass of all kinds, decanters, tumblers, &c. and cut glass; beer and porter, bottled and barrelled; saddles, bridles, boots, shoes, tin and copper wares, stills, &c. weaver's reeds, mettle buttons, snuff, cigars and twisted tobacco, chairs, cabinet work, carpenter's planes, and a number of other articles of a minor consideration.

All our manufactures seem to grow in extent and perfection with the growth of the people, and as the manufacturer increases in wealth, they will increase in number and stability, until the town arrives to that pitch of eminence which will truly entitle it to a name which has been already bestowed on it by strangers, the "*Birmingham of America.*"

What adds much to the surety and safety of Pittsburgh becoming a residence for strangers, is the cheapness of its market, which is abundantly supplied with all the necessaries of life from a rich and fertile country in its vicinity. Beef, well fatted, sells from $2\frac{1}{2}$ to 4 cents a pound; flour from $ 1 75 to $ 2 50 per hundred weight, or from $ 3 50 to $ 4 50 per barrel; corn 33, potatoes 40, and turnips 18 cents per bushel; cabbage 4 cents a head: butter from 10 to 18 cents per pound; fowls 10, ducks 25, geese 33, and turkies from 40 to 75 cts. each: venison 3, pork, $3\frac{1}{2}$ to 4, hog's lard 8, mutton 4, veal 3, and cheese from 8 to 12 cts. per pound; eggs 10 cents a dozen; onions from 75 cts. to one dollar, Indian meal 40 cents, and soup beans one dollar per bushel; bacon from 6 to 10 cents per pound; whiskey 40 cents per gallon, cider from 2 to 4 dollars per barrel, peach brandy 80 cents per gallon, beer 5 dollars per barrel; 700 country linen 40 cents, and tow do. 33 cents per yard: dried apples and peaches one dollar per bushel, green do. 30 cents;

salt 1½ dollar per bushel; fresh fish 3 and 4 cents a pound; country sugar from 10 to 12 cents a pound; and many other articles with which our market-house is filled, equally cheap.—These are about the average prices of our market throughout the year.

I have seen English gentlemen very pleasantly surprised after reading the above rates of our market. "What! said one to me, (after learning that a mechanick could earn a dollar a day for his labour,) can a man earn as much in one day as will buy him *thirty pounds of beef!*—In London, continued he, we pay *a shilling a pound for beef*, and a man's wages are considered high at *half a crown a day*, and others get but *a shilling*.—No wonder that you are an independent and happy people—no wonder that people from all nations are flocking to your hospitable shores—and it is no wonder that your government is admired by all men of sense and reflection throughout Europe—but, continued he, in a reverie, their tongues are tied—their bodies and senses manacled.—"

It is the judicious contrast of these things that sounds welcome to the ear of a stranger, and in their effects, are equally beneficial to the pocket of the industrious man.—It is these circumstances, so favourable on all sides, that must push Pittsburgh to an eminence in arts and manufactures, beyond what may be thought at present an extravagant calculation.

The inhabitants of this place are a mixture of many nations, principally Americans; a good many Irish, and some English, some Scotch, some French, Dutch and Swiss, and a few Welch and Italians. To be thus brought together from all quarters of the world, with their various fashions, prejudices and passions, in religion and politicks, they are generally friendly to each other, hospitable, and disposed to encourage each in his particular business in proportion to the appearance of industry and good behaviour. But a few jealousies, likes and dislikes, may reasonably be supposed to exist. These in time however will wear off, and as the interest of all become more united, an open and candid

friendship will more readily shew itself, until the whole body politick will become a little brotherhood of faith and confidence.

Talents and education are not deficient in Pittsburgh. The bar and pulpit are well filled. Some of our lawyers are perhaps not excelled by any in the United States, either for eloquence or legal knowledge.—The benefit of well regulated schools, the circulation of publick prints, and a publick library, form the basis of the minds of the people.—The free use of these, keep them in the habit of thinking, reflecting, and acting deliberately; and in all publick and national concerns, enable them to act as become the free citizens of a great and independent nation, with firmness and unanimity. Theatrical performances are sometimes attended to by the young gentlemen of the place, by way of improvement to themselves, and amusement to the town; not for gain. Some of our young men have formed a society, for the valuable purpose of collecting the natural and artificial curiosities of our country for a Museum.

On the other hand, the education of young ladies is by no means neglected: their minds are early impressed with the habits of industry, at the same time they are engaged in learning the use of their needle, pencil, musick and dancing; having already acquired the more useful branches of education, reading, writing, arithmetick, grammar, geography, and letter writing.

Pittsburgh is the seat of justice for Allegheny county, Penn. and has, with justice, been emphatically called the key to the western country. It is 300 miles W. by N. of Philadelphia, 252 from Washington city, about 335 from Lexington, K. and about 1100 from New Orleans by land, though 2000 by water. It is in lat. 40° 35′ N. long. 80.° 38′ W. being about five degrees westward of Philadelphia. Our climate, though irregular, and subject to many changes in the different seasons, is healthy; any thing like epidemical diseases, fevers, &c. being unknown among us; except those that rage without bounds; such as the *Influenza*, in the

summer and fall of 1807, whose contagion, though but in few instances mortal, flew to all parts of the United States, and perhaps throughout Europe in a trice; place and situation proving to have no effect on its passage, it seems to have been wafted along with the wind and atmosphere of the season, confined in its attacks and effects to neither sex nor age, but as the constitution of those on whom it fell, parried it off with a less or greater degree of force, and success—for like a bold and invidious enemy, its assaults were violent and repeated, attacking frequently the same patient three and four times.

The fogs on the rivers, though sometimes very heavy, do not prove injurious; being the exhalation of the sun during the day, from limpid streams, and the moisture of a fragrant and luxuriant wood.

On entering the town, the stranger is rather offended with its dark and heavy appearance. This arises from the smoke of the coal, which is used as the common fuel; and of which about 250,000 bushels are consumed annually. It costs six cents a bushel at your door, and is said to be equal to any in the world. Our rough hills are filled with it, and our rooms in winter feel the effects of its warmth, and cheerfulness. Wood as an article of fuel costs 2 dollars a cord delivered.—The abundance and cheapness of coal will be peculiarly advantageous to Pittsburgh in her progress in arts and manufactures. Coal Hill, on the south side of the Monongahela, abounds in coal; and a pit in it is said to have taken fire about the year 1765, and continued burning for 8 years; and another pit on Pike run, which burned 10 years. This is a high and steep hill, and its top affords a handsome prospect of the town and rivers below it.

There are two seasons in the year that Coal hill has an appearance of the sublime and beautiful:

In the spring, when vegetation begins to shoot, and when its bold and steep front shews forth the variegated scenery of the most exquisite garden of blooming shrubbery, and luxuriant wood, with various hues

and shades, each coming out at its particular season—this scenery, contrasted with the dull monotony during the absence of vegetation, is at once delightful to the senses, and cannot but cheer and invigorate the spirits of the contemplative mind on approaching the bank of the river from the interior of the town, after having been enveloped in smoke for six or seven months of a rugged and fluctuating winter.—The other season is, when nature's dress is pellucid snow—this scenery is at once sublime and awful, while it brings to mind the cold regions of the north, where the same scene is uniform throughout the year, and where animal life is scarce capable of existence.

From the immense quantity of coal burnt, there arises a cloud of smoke which hangs over the town in a body, and may be seen at two or three miles distance; when in the town, this cloud of smoke is not discovered, and the place soon becomes familiar to the eye, while the ear is occupied with the mixed sounds of the implements of industry from 5 o'clock in the morning till 9 at night.

Pittsburgh is a place of general deposit for goods going from the seaports to the westward. By an act of congress, it is made *A Port of Clearance*, for all goods, wares, &c.

From the year 1802 to 1805, the following vessels were launched at the ship yards: The ships *Pittsburgh*, *Louisiana*, *General Butler*, and *Western Trader;* Brigs *Nanina*, *Dean*, and *Black Walnut;* schooners *Amity*, *Allegheny*, and *Conquest*. The *Monongahela Farmer*, and brig *Ann Jean* were built at Elizabethtown. Misfortunes, and accidents, in getting these vessels down the Ohio, which most probably arose from bad management in the persons entrusted with them, has given a damp to ship building at present. Barges, keels, Kentucky boats, &c. are built in great numbers to the amount of about $ 12,000 annually.

A view of some of the items which form the mass of trade in and through Pittsburgh, may not be uninteresting: The manufacture of hemp into ropes, rope

yarn, and bagging, is a business in itself which is enriching the state of Kentucky much faster than if the citizens had discovered a gold mine equal to some of those of Mexico or Peru. The quantity of spun yarn for ropes, and hemp which has passed through this place for the Baltimore and Philadelphia markets, for the past season (1810), stands thus:—

	lbs.
Through Messrs. T. & J. Cromwell's warehouse, from May 1, 1810, to November 14, of the same year, 6½ months—	882,000
980 kreels yarn, averaging 900 lbs. each	308,944
Hemp,	
C. Cowan's warehouse, 83 kreels of yarn, averaging 900 lbs. each,	74,000
G. Anshutz's warehouse, 254 bales hemp,	24,000
James Adams's warehouse, spun yarn in two months,	90,000
Total spun yarn, and hemp— lbs.	1,378,944

Which is worth in the Philadelphia and Baltimore markets 15 cents per pound at a low average, amounting to the sum of $ 206,841, 60 cts.

The quantity of bar iron and castings which are sold in our market stands thus:—

	tons
G. Anshutz, bar, rolled, and slit iron, for 1810,	332
Castings, - - - -	75
C. Cowan, castings, - - -	50
Sundry iron, - - - -	300
T. & J. Cromwell, iron, - -	150
Castings, - - - -	100
Say for what passes through all other hands,	300
	1,307

Total, one thousand three hundred tons bar iron and castings, worth per ton upon an average $ 140, amounting to 182,980 dollars.

The following articles also form a busy and extensive trade in and through this place:—

Bacon and pork, principally from Kentucky, Anshutz.	tons. 15
Sundry bacon, Cowan.	35
Total bacon,	50

worth 10 cents per lb. amounting to 11,000 dollars.

Bales cotton 600, averaging 400 lbs. Cromwells, Cowan, Anshutz & others	lbs. 240,000

worth 19 cents per lb. amounting to $ 45,600.

Cut and wrought nails, Anshutz, of Juniata iron.	lbs. 150,000
do. do. Cowan,	40,000
do. do. others, say	20,000
lbs.	110,000

One hundred and ten thousand pounds cut and wrought nails, worth 17 cents per pound, amounting to $ 18,700.

Tobacco, Cromwells, Cowan and others, about	lbs. 20,000

worth 13 cents per lb. upon an average, amounting to $ 2,600.

Glass, (Cromwells) Geneva worth each year,	$ 10,000

All the above articles, the nails excepted, which are manufactured here, may be considered about half of what may be called the *passing domestick* trade of Pittsburgh, and which amounts to the round sum of $ 458,624 60 cts. If we include salt-petre, of which I have no just idea of the quantity, but which I know is very considerable, lead, the articles of salt, whiskey, country linen, paper and a few minor articles, which form items of trade and barter, but which are not manufactured in town, I think we may safely give to this species of our commerce, the sum of *one million of dolls. annually.* And probably about the same sum to articles actually manufactured by our citizens from raw materials. Thus have we a trade in domestick articles,

which are the *soul* of our country, upon a rough and hasty calculation, and which I feel confident is within the mark, *of two millions of dollars annually*, half of which amount is manufactured from the products and raw materials of the country. Our merchants in town import of foreign importations, which are the *great sore* of our country, and will be so as long as the balance of trade is against us on the sea, and this will continue so long as the belligerents shall continue in the spirit of trying which shall do the other the most harm,—probably about one million of dollars in amount annually, which are vended here principally for cash. It is possible, however, they may be enabled to pay out of this million, two hundred and fifty thousand dollars, or one-fourth, in articles of barter, such as country linen and flour, and what else I know not, leaving *a balance of trade against Pittsburgh, and in favour of Philadelphia and Baltimore, of seven hundred and fifty thousand dollars annually, which must be paid in specie or an equivalent.* A man might ask where this said sum of seven hundred and fifty thousand dollars is to come from, or from what sources collected, to pay this annual payment to the eastern merchants? We have neither gold nor silver mines, nor do we, as I know of, coin any Spanish or United States' dollars. And how or by what means we are to extricate ourselves from this accumulating debt, would require the financial head of a Gallatin, or a Neckar, or some other financier equally great in figures and calculations. There is one method, however, without troubling other people any thing about it, which would effectually cure the disease, and which would be something in this way: that every man who cannot buy a coat, or any thing else, he or his family may stand in need of, with the products of his farm or shop, not to buy one at all;—but buy wool or raise sheep, which produces it, hire girls to spin, or get it carded and spun at some of the carding machines, then get it wove by some of your honest weavers, and dyed and fulled by the fullers, all and each of whom will take in pay a hundred of flour, a

quarter of beef, a few pounds of butter, cheese, &c. which are the products of your farm, and can be raised and made by your sons and daughters.

If you are a mechanick, and your shop be filled with the articles of your ingenious workmanship, go to the merchant and say, I want a few *foreign* goods, and will give you *domestick* ones for them, otherwise, we cannot trade: If he says, no, I must have money: You return home, and say to your wife, and daughters, and sons, I cannot buy you the *fineries* you wanted, for the merchant will not take the articles I make by the sweat of my brow in pay for his goods, and I cannot coin dollars; you must therefore set your hands and heads to spinning, weaving, &c. and make fineries of a more substantial nature than his for yourselves—here is cotton—here is wool—here are spinning wheels I have just bought from our neighbour Giles, all of which I have already paid for in the articles of my shop—now set to work and let us see what can be done—let us try and help ourselves, and see if our neighbours wont like us full as well in our home made garments, as in those got from foreign countries, which perhaps shew better for a short time but wont last half as long, nor are they half as warm, or as comfortable.

I would take this to be something like honest patriotism, and the putting the principle into practice would completely check the monstrous evil of having the balance of trade to the amount of seven hundred and fifty thousand dollars against us annually.

OF THE OHIO RIVER.

ITS CHANNEL, RIPPLES, ISLANDS, SAND-BARS, RIVERS, CREEKS, TOWNS, DISTANCES FROM PLACE TO PLACE, &c.

WITH CORRECT MAPS.

ON shoving off at Pittsburgh, if the water be high, your boat requires but little attention; if low, to avoid grounding, you must before you get quite opposite the Point, begin to pull over towards the left shore, going between the end of the Monongahela bar, and one made by the entrance of the Allegheny.

(See MAP 1, page 76.)

No. 1, *Hamilton's island*, 3 3

This island is about one mile long, and is now the property and residence of doctor Brunot, a French gentleman of much taste in agriculture and horticulture, skilled in the practice of physick, and celebrated for his open and general hospitality to strangers and friends.

At the head of this island keep close to the right shore, and after passing the point bear towards the island, and keep close to it all the way down, in order to avoid the sand bar projecting out from the right shore opposite the foot of the island. At the foot of the island, on the left, are large projecting rocks, called "*M'Kee's Rocks.*"

No. 2. *Irwin's island*, *7 miles long*, 4 7

At the head of this island is a sand bar bearing towards the right shore, therefore keep about one third of the breadth of the river to the right, and at the *first ripple* below and opposite Baldwin's mill, leave a big breaker or rock close to the right.—Now bear towards the island to avoid the *Second* or *Horse tail ripple*, about half way down the island leaving a sand bar to the right and some breakers to the left.

No. 3, Hog island is small and just below No. 2, and having a sand bar at its head, you must bear on the right shore, then pull towards the island, passing round its foot close to the left, as if you intended to land at Middletown, a village of six or seven houses on the left bank; being now pretty near the left shore, incline to the right, passing the *Third* or *Wooley's ripple* about two thirds over from the left bank, and half a mile below Hog island.

No. 4, *Dead Man's island and ripple.* 8 15

In high water this island is covered—you pass it on the right; the channel is very serpentine. Being in the middle of the river at its head, where there is a ripple, you must pull for the right shore, thence towards the island, then again to the right shore, and again towards the left, which will put you clear of Dead Man's ripple just below the island, where the water is very rough and looks dangerous.

Big Seweekly creek, right side, 2 17

Opposite the mouth of this creek is a sand bar, therefore bear on the left shore—Here used to be an old French fishing basket.

Loggstown right bank, Indian Loggstown left, (M. D.)* $1\frac{1}{2}$ $18\frac{1}{2}$

Here is a large sand bar running up from the left shore to near the right, and between the head of it and the right shore are large logs; the first you keep to the right, the second and third are opposite each other; these you may go between, inclining, as soon as you are past them, to the middle of the river.

Legionville, or the encampment of general Wayne in the year 1792, is just below Loggstown on the right bank of the river.

No. 5, *Crow's island, divided by a gut,* $5\frac{1}{2}$ 24

Channel right side close to the island; a sand bar between the island and right shore occa-

* The places marked thus, *(M. D.)* meaning Measured Distance—were accurately measured by Col. Thomas Hutchins, and are taken from his "*Table of the Distances between Fort Pitt, and the mouth of the river Ohio.*"

1
2
3
4
5
6
7
8
9
10
11
12
13
Chartiers Cr.
Middle T.
Bea. C.
George T.
Fawcetts T.

sions a break, called *Waller's ripple;* thence to Big Beaver you have deep and gentle water.

Duck run on the left side,	1	25
Big Beaver creek, right side, (M. D.)	4¼	29¼

On approaching this creek you will see some large rocks on the left shore; when opposite them, pull over for the town and keep about 100 yards from the right shore—if you want to land, you must do it at the ferry houses just below the mouth of the creek, there being no landing place opposite the town.

Beaver creek or river, is a large stream, 60 yards wide at its mouth, affording water enough in swells, for keel boats to Youngstown, thence to Warren, Trumbull co. Ohio, 50 miles by land from its mouth. Goods take water above the falls, 4 miles up. These falls are three miles long and afford excellent seats for mills; there are now on them 4 grist, 2 saw mills, and a forge. A furnace has been lately erected at the middle falls of Big Beaver, and another upon one of its branches.—At Kishkuskes, 16 miles up, Beaver forks into two branches; one interlocks with French creek and Cherage, the other with Muskingum and Cuyahoga; on this branch 35 miles above the forks are several salt springs.

BEAVER, *(formerly* FORT M'INTOSH,)	¾	30

Is situated about three quarters of a mile below the creek, on a high stony plain, where the old Fort M'Intosh stood, 200 feet above the level of the river. The town was laid out in 1797—8, and probably would have had a fairer prospect of rising to some importance had it been built at the mouth of the creek. One inconvenience at least has arisen from its being where it is; the inhabitants have not been able to get water by pumps, but have been obliged to resort to wooden pipes as conductors to the waters of a spring, at a hill half a mile back of the town. A well has since been sunk, which

give a tolerable supply of water. Beaver has about 30 scattered houses in it, a stone jail, a post office, 4 mercantile stores, several publick inns, a printing office,* which issues a weekly paper, and is the seat of justice for Beaver co. P. 30 miles West of Pittsburgh.

About 12 miles North of Beaver is GREERSBURGH, on the head waters of Little Beaver creek, a thriving village. It has a stone academy, post office, and 4 stores.

One mile below the town keep between some large breakers and the left shore.

Racoon creek left side.	2	32
No. 6. First island below Beaver ½ mile long,	4	36
Channel left side, middle of the river.		
No. 7. Second island, one mile long.	3	39
Channel right side, pretty close to the right bank, at the head of No. 7. is a smart chute.		
No. 8, Grape island, half a mile long.	2	41
Channel left side close to the island.		
GEORGETOWN	1½	42½

Is a small village on the left bank just above the mouth of Little Beaver; has two mercantile stores and a post office, is in Beaver county, Pa.—A few yards from the opposite shore, and a little above the town a spring rises from the bottom of the river, producing an oil similar to Seneca oil, which is thought to proceed from a bed of mineral coal in the vicinity of the spring. Channel past Georgetown, is in the middle of the river.

Little Beaver creek, right hand side, (M. D.)	¼	42¾

A quarter of a mile below Georgetown.—Near the mouth of this creek are two grist, one saw, and a paper mill erected in 1807—8, by Messrs. Coulter, Beaver and Bowman.

Mill creek enters on the left side, a quarter of a mile below Little Beaver; here the state line between Pennsylvania and Virginia on the

* This quit the town in 1808.

the side, and Ohio and Pennsylvania on the other, crosses the river, running nearly a North and South direction.

No. 9. *Mill creek island one quarter of a mile long, and three quarters below Georgetown.*

Channel right side—the first chute is at the upper end of the island; here keep close to the right shore, when half way through, pull for the island, and keep close to it for 150 yards, thence bear a little towards the right shore, but not so much as to prevent you from going to the left of

No. 10, *Custard's island* $\frac{1}{4}$ *of a mile below No.* 9.

Channel left side, close to the lower point of the island. A little below is King's creek, on the left side.

FAUCETSTOWN,

Right bank, half a mile below No. 10.

N. 11, *Baker's island, (just above Yellow creek.)*

Channel left side, if you take the right channel, keep some ugly rocks to the right. $11\frac{3}{4}$ $54\frac{1}{2}$

Yellow creek, right side, (M. D.)

Channel close to the left hand shore. $2\frac{1}{2}$ 57

No. 12, *Neasley's cluster of islands,*

Channel right side.

No. 13, *Tumbleston's island, (and a little one below it.)* 2 59

Channel left side, between a snag near the shore and the island. Just below the island to the right is a sand bar, and a little below it to the left is another—there is no difficulty in going between them.

Crockton's run and mill, right side, 3 62
Black horse tavern left side.

Just below is White's tavern, further on are high and broken cliffs on the left, and a little below these, a small creek enters on the left side.

(See MAP 2, page 81.)		
No. 14, *Brown's island*,	4	66

Channel close to the left shore for about 50 yards, thence towards the island. On the left a steep and high hill presents itself.—Below this island is a ripple, keep close to the left shore.

Willis's creek enters on the right shore,	5	71

Just above the mouth of this creek on a rock under the hill, may be scraped up a fine white salt, especially after a shower of rain and a warm sun. There is also a spot on the same hill where in winter the snows are observed to smoke as if warmed by an internal fire.

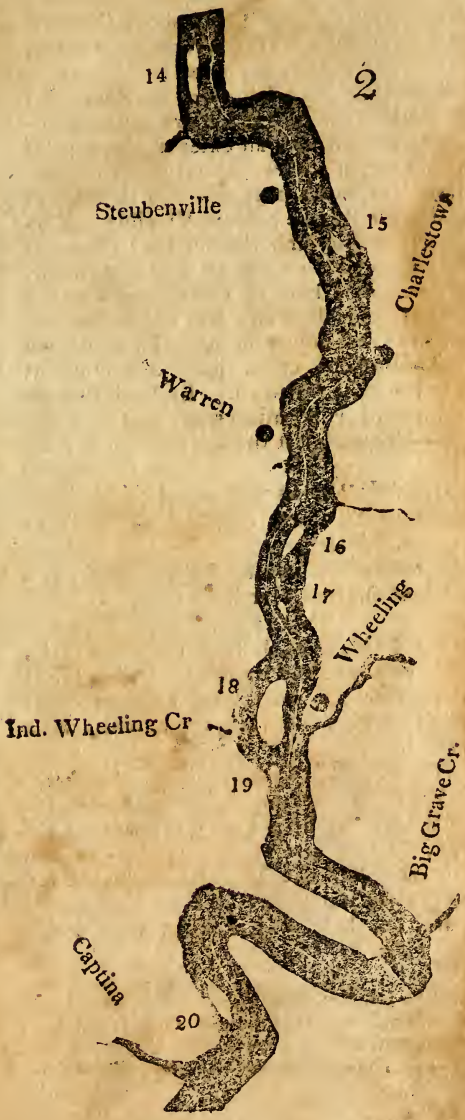
Harman's creek, (Holliday's Cove) left side,	1	72

This is a principal place for the delivery of flour.

STEUBENVILLE,	1	73

Is handsomely situated on an elevated second bank of the river; it is a thriving town, and has 12 mercantile stores, about 100 dwellings, some of them neatly built with brick, a stone jail, a court house of brick (now 1807) going up, a brick presbyterian church, a land office, post office, and a printing office, issuing a weekly paper. It was laid out in 1798—9 by James Ross, esq. of Pittsburgh, and Bazil Wells, esq. of Jefferson county, Ohio, of which it is the seat of justice.—The publick inns are numerous, and well accommodated; the citizens are industrious, kind and hospitable to strangers; and with due attention to its prominent interests, Steubenville may rise to importance. It is 38 miles southwest of Pittsburgh by land. A bank was established here in 1809, of 100,000 dollars capital, B. Wells, president.

No. 15, *Mingo bottom isl. channel right shore*,	2	75
Indian and Virginia Cross creeks, being opposite each other. (M. D.)	1 1/4	76 1/4


14
2
Steubenville
15
Charlestown
Warren
16
17
Wheeling
18
Ind. Wheeling Cr
19
Big Grave Cr.
Captina
20

About one mile and a half above Charlestown, keep pretty close to the right hand shore.

CHARLESTOWN, $2\frac{3}{4}$ 79

Is situated on the left bank of the river, contains about 80 dwellings, a court house, pillory*, jail, an academy, an extensive pottery of stone and queen's ware, a boat yard, 8 mercantile stores, and a post office. It is the seat of justice for Brooke county, Virginia. This is a good place for embarkation, the navigation being always good except in very low water. In the neighbourhood of Charlestown are a number of valuable grist mills, which produce some of the best flour sent to the New Orleans market.—Buffaloe creek joins the Ohio at the south end of the town. By land through Washington it is 50 miles southwest of Pittsburgh.—Channel past the town is near the left shore.

Beach bottom bar, channel right shore, 3 82

Indian Short cr. right side, Va. Short cr. left side, 5 87

Just below the mouth of these creeks is a ripple, best channel near the left shore.

WARREN,

A small village of Jefferson county, Ohio, stands just above the mouth of Indian Short creek.—Over the mouth of Virginia Short creek, is a bridge and a large ware house at its south end.

No. 16, *Pike island,* 4 91

No. 17, *Twin islands just below No.* 16.

Glenn's run empties in just below the Twin islands: In very low water keep No. 16, and the lowermost of the Twin islands to the left hand, in good water keep all on the left.

No. 18, *Wheeling island, (about* 1 *mile long.)* 5 96

* What a pity that an enlightened people, in an enlightened age, should so far lose sight of the common principles of humanity, as to set before the door, or publick seat of justice, such a disgraceful, inhuman, and savage machinery of punishment.

Channel left side—at the upper end of the island keep close to the left shore, until you see the town, thence bear towards the island to avoid logs to the left; after passing the town keep the middle of the river.

At the northwest side of Wheeling island, Indian Wheeling creek empties in, and at its mouth stands a newly laid out town called CANTON, at present containing 13 houses.

WHEELING,

Stands on a high bank of the river, south of the island and nearly opposite its middle. The hill approaches so close on the river that there is room but for one main street running parallel along its bank for half a mile.—The town contains 115 dwellings, 11 mercantile stores, 2 potteries of stone ware, 1 nail factury, 1 extensive rope walk, 1 boat yard, a market house, court house and jail, a publick library,* a printing office,* 1 bookstore,* and a post office that receives and despatches the mail to the eastward by stage twice a week, and once a week to the westward.

The United States road from Cumberland, if it strikes the Ohio at Wheeling, will tend very much to accelerate the growth of the town. That favourable circumstance, added to its being an excellent place for embarkation, will doubtless render Wheeling a place of considerable importance in a few years. It is now a place of business, and is a great thoroughfare of people from all parts of the United States travelling through it.

Wheeling is the seat of justice for Ohio county, Virginia, by land 58 miles southwest of Pittsburgh, and 140 miles W. by N. of Cumberland. Not far from this place a wall is said to have been discovered some feet under ground, regularly built, apparently the work of art.—Wheeling creek empties into the Ohio just below the town, and on the point of land formed by it and the river, stands the

* These quit the town, 1808—9.

remains of an old fort, a Virginia frontier post.
Wheeling is well supplied with fossil or stone coal from the hills, fish from the Ohio, and the market is well furnished with all the necessaries of life at a cheap rate. Publick inns are numerous and tolerably well regulated.

No. 19, *M'Mahon's (Boggs') island*, 2 98
Channel, at the upper end near the left shore, at the lower end near the island—just below a small creek puts in on the right side, called M'Mahon's creek.

Little Grave creek, left side (ripple.)* 9 107
Half a mile above this creek is a sand bar, channel between it and the left shore.
The hills of Grave creek furnish excellent

* The appearances of ancient remains at this place is well worth a visit to every man of observation who may pass near them. The big mound, or grave, as it is called, is an object, which, on approaching it, I will venture to affirm, will surprise and astonish any man more than he is aware of. It is at present in the woods, and a quarter of a mile from Mr. Tomlinson's in a S. W. direction. On coming close to this mound you are surprised at its mountain like appearance, and the darkness occasioned by the height of the trees on its summit over those on the plain below. Its perpendicular elevation is about 75 feet, 180 yards in circumference around its base, and 40 around its flat on the top It appears to be a very regular circle, and forms in its rising an angle of about 80 degrees. The centre of its top is sunk in perhaps four feet, forming a bason of that depth and about eight or ten feet over. Its summit bears an aged white oak of 4 feet in diameter, and its sides are richly clad with a luxuriant growth of all the different kinds of trees of the forest, and of the same size and appearance. It stands in an extensive plain, having neither ditch nor rising ground near it, nor can it be discovered where the earth of which it is formed has been taken from. East of the big mound, there are several small ones in the open fields, and a number of fortifications, whose particular dimensions I did not take. I have seen a number of these mounds in Pennsylvania, Ohio, Virginia and Kentucky, and have heard and read of others, but they all fall far short of the size and astonishing magnitude of the one at Grave creek. On this plain and immediately amidst the smaller mounds and fortifications, Mr. Tomlinson laid out a town about twenty five years ago, which he calculated would be chosen for the seat of justice for Ohio county, Virginia, but Wheeling being fixed on for that purpose, Mr. Tomlinson's town went to decay; an appearance however of an old town still remains.

Coal and in great abundance.—Half a mile below Little Grave creek is

Big Grave creek, same side, right shore.

Grave creek ripple, just below the creek,

Channel one third over from the left bank.

No. 20, Captina island, channel left side,	5	112
Captina cr. ¾ of a mile below, right side,		
Baker's Station, left bank, channel left shore.	2	114
Sunfish creek right side, ½ mile below Baker's Station.		

(See MAP 3, page 86.)

No. 21, Wood island, channel right side, (Cressap's just above.)		
Fish creek, left side, just below No. 21.	3	117
No. 22, is a large sand bar,		

About a mile below Fish creek, channel nearest the left shore.

Proctor's run, left side (Well's just above,)	6	123

Just below this run is a sand bar, channel close to the bar, leaving it a little to the left.—Two miles below Proctor's run a creek enters on the right side.

Fishing creek, and Martin's Station,	5	128

Just below is a sand bar, best channel on the left shore. The river here winds considerably to the right when you enter the head of

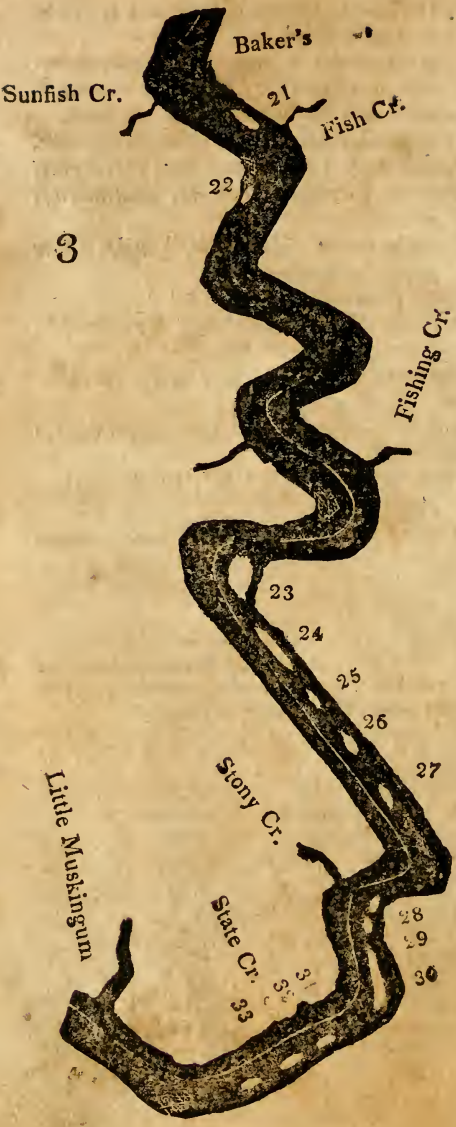
Long Reach, and Peyton's island, No. 23, (M. D.)	2	130

In this reach which is remarkably straight, are five islands, first Peyton's island No. 23, Williamson's island No. 24, Pursley's island No. 25, Wilson's island No. 26, John Williamson's island No. 27, all of which keep to the left. Opposite Wilson's island, on the right side, is a run and a bridge across its mouth.

End of Long Reach, (M. D.)	16½	146½

A sand bar near the left shore, channel right shore.

Stony creek, right shore, half a mile below.


Baker's
Sunfish Cr.
21
Fish Cr.
22
3
Fishing Cr
23
24
25
26
27
Stony Cr.
Little Muskingum
State Cr.
28
29
30
33

Little island No. 28, *Bat island No.* 29.	2½	149
These two islands are connected by a bar, channel right side.		
No. 30, *Middle island.*		
French creek just below it, right side.		
Channel right shore past No. 30, as well as past the three brothers, 1st B. No. 31, 2d B. No. 32, 3d B. No. 33.		
State creek, right side, opposite the middle of No. 32.		
End of 3rd Brother, No. 33.	10	159
Just below the 3rd Brother is a small willow island—and a sand bar, channel near the right shore.		
Bull creek, left side.	4	163
From above this creek keep the right shore for two miles.		
Little Muskingum river, right side,	5	168
Has a handsome Chinese bridge over its mouth.		
(See MAP 4, *page* 90.*)*		
No. 34, *Duval's island, best channel right shore.*		
Duck creek, right shore, opposite No. 34.		
Muskingum river, right side, (M. D.)*	4	172
This is a fine gentle river, 250 yards wide at its mouth, and navigable without any obstructions to the Three Legs, 110 miles up, with large batteaux, and to a little lake at its head 45 miles further, with smaller ones; from thence by a portage of about one mile, a communication is opened to lake Erie, through Cuyahoga, which at its mouth is wide and deep enough to receive large sloops from the lake.—The legislature of Ohio has passed a law to raise by way of lottery the sum of 12,000 dollars for improving the navigation of these two rivers. The Big salt spring is 8 miles from the river and 50 from Marietta, it yields		

* An Indian name signifying "*The Elks' eye*."

water sufficient to keep 1000 gallons constantly boiling, ten of which yield a quart of superior salt. At the mouth of this river a ferry boat is carried rapidly across by means of a rope extending from bank to bank, and a windlass ingeniously worked at each end.

MARIETTA.

Is finely situated at the mouth of Muskingum, having about 90 houses on the upper and 30 on the opposite bank, where Fort Harmar formerly stood. A bank was established here in the summer of 1807, capital 100,000 dollars, of which Rufus Putnam is President. Ship building is carried on here (1807) with spirit.—It has one printing office, a post office, two rope walks, a court house, a market house, and an academy. The inhabitants are principally New Englanders, whose industry is as proverbial as their system of life is economical, moral and religious. About a mile above Marietta and on the bank of the Muskingum are some curious remains of Antient fortifications.* Marietta is the seat of justice for Washington county, Ohio, Lat. 39° 34′ N. Long. 82° 9′ W.—About 146 miles southwest of Pittsburgh by land.

* The largest SQUARE FORT, by some called *the town*, contains forty acres, emcompassed by a wall of earth from 6 to 10 feet high, and from 25 to 36 feet in breadth at the base. On each side are three openings, at equal distances, resembling twelve gateways. The entrances at the middle are the largest, particularly that on the side next the Muskingum. From this outlet is a COVERT WAY, formed of two parellel walls of earth, 231 feet distant from each other, measuring from centre to centre. The walls at the most elevated part on the inside are 21 feet in height, and 42 in breadth at the base, but on the outside average only 5 feet high. This forms a passage of about 360 feet in length, leading by a gradual descent to the low grounds, where it probably at the time of its construction reached the margin of the river Its walls commence at 60 feet from the ramparts of the fort, and increase in elevation as the way descends towards the river; and the bottom is crowned in the centre, in the manner of a well formed turnpike road.

Within the walls of the fort, at the northwest corner, is an oblong, elevated square, 188 feet long, 132 broad, and 9 feet high; level on the summit, and nearly perpendicular at the sides. At

ZANESVILLE, the seat of justice for Muskingum county, is seated on the east side of the Muskingum river, 50 miles by land above Marietta. It contains (1807) 60 families. It is now, 1810, made the seat of government of the state of Ohio, and in consequence has taken a rapid start in improvements, buildings, and business.

SPRINGFIELD, another new town on the opposite side of the river.

Mile creek, right side.	1	173
No. 35, *Muskingum island,*	2	175

Channel close to the island on the right side.

No. 36. *Second island, channel left side.*	4	179

VIENNA,

A small village on the left bank, half way between second and third islands.

No. 37, *Third island, chan. right side..*	3	182

the centre of each of the sides the earth is projected, forming gradual ascents to the top, equally regular, and about 6 feet in width.

Near the south wall is another elevated square, 150 feet by 120, and 8 feet high; similar to the other, excepting that instead of an ascent to go up on the side next the wall, there is a hollow way 10 feet wide leading 20 feet towards the centre, and then rising with a gradual slope to the top.

At the southeast corner is a third elevated square, 103 by 54 feet, with ascents at the ends; but not so high nor perfect as the two others.

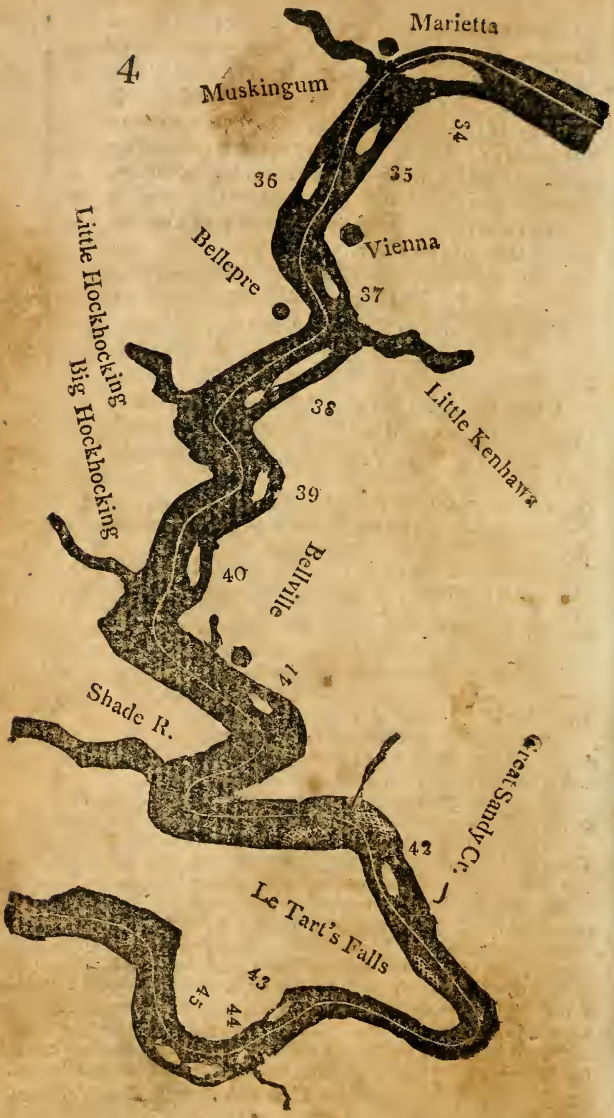
A little to the southwest of the centre of the foot is a circular mound, about 30 feet in diameter and 5 in height; near which are 4 small excavations at equal distances, & opposite each other.

At the southwest corner of the fort is a semicircular parapet, crowned with a mound, which guards the opening in the wall.

Towards the southeast is A SMALLER FORT, containing twenty acres, with a gate-way in the centre of each side and at each corner. These openings are defended with circular mounds.

On the outside of the smaller fort is a MOUND, in form of a sugar-loaf, of a magnitude and height which strike the beholder with astonishment. Its base is a regular circle 115 feet in diameter; and its perpendicular altitude is 30 feet. It is surrounded with a ditch 4 feet deep and 15 wide, and defended by a parapet 4 feet high, through which is an opening or gate-way towards the fort 20 feet wide.

There are other walls, mounds, and excavations, less conspicuous and entire, but exhibiting equal proofs of art and design.


4
Marietta
Muskingum
34
36
35
Vienna
Bellepre
37
Little Hockhocking
Big Hockhocking
38
Little Kenhawa
39
Bellville
40
41
Shade R.
Clear Sandy Cr.
42
Le Tart's Falls
43
45
44

Congress creek puts in just below 3rd island, right side.

Little Kanhawa, left side, (M. D.) 2½ | 184½

Is a large water interlocking with the waters of the Monongahela. Just above its mouth stands

WOOD COUNTY *(V.)* COURT HOUSE.

A town from its situation, which may yet rise to considerable importance.

Belleprie Settlement, is on the opposite side of the Ohio to Little Kanhawa, and extends from above it to the end of

*No. 38. Blannerhasset's beautiful island.** 6½ | 191

Channel right side, near the right shore—just below No. 38 are two small islands.

Little Hockhocking right side, 3 | 194

Just below a small creek enters on the right side.

Newbury Settlement and island No. 39. 2½ | 196½

Channel right side.—A cavern just above Newbury.

No. 40, Mustaphy's island, chan. right shore. 1½ | 198

* *Blannerhasset's island*—"On ascending the bank from the landing, (a quarter of a mile below the eastern end,) we entered at a handsome double gate, with hewn stone square pilasters, a gravel walk, which led us about 150 paces to the house, with a meadow on the left, and a shrubbery on the right, separated by a low hedge of privy-sally, through which innumerable columbines and various other hardy flowers were displaying themselves to the sun. The house is built of wood, and occupies a square of about 54 feet each side, is two stories high, and in just proportion; it is connected with two wings, by a semicircular portico or corridor running from each front corner. The shrubbery well stocked with flowering shrubs, and all the variety of evergreens natural to this climate, as well as several exotics, surrounds the garden, and has gravel walks labyrinth fashion winding through it. The garden is not large, but seems to have had every delicacy of fruit, vegetable and flower, which this fine climate and luxurious soil produces. In short Blannerhasset's island is a most charming retreat for any man of fortune fond of retirement, and it is a situation perhaps not exceeded for beauty in the world. It wants however the variety of mountain—precipice—cataract—distant prospect, &c. which constitute the grand and sublime."

Western Tour.

Great Hockhocking river, right side, (M. D.)	$2\frac{1}{2}$	200$\frac{1}{4}$

This is a considerable river of Ohio State, navigable 70 miles. NEW LANCASTER,* a new and thriving town, is situated at its head. On this river are quarries of free stone, mines of iron ore, and one of lead is said to have been discovered, salt springs and coal also abound. On the Great Hockhocking 14 miles below New Lancaster a *paper mill* is now, 1810, erecting by the Messrs. Pitchers.

Lee's creek, left side.	$2\frac{1}{2}$	203

BELLEVILLE, a town and settlement on the left bank, just below Lee's creek, from which to the town the channel is close to the left shore, the other part of the river being rocky.

No. 41. Belleville island, channel right shore,	2	205
Pond creek, left side, channel left shore,	1	206

Devil's Hole, a remarkable cavern, just above Shade river: It is in the face of a rock, about half way up a steep hill, close to the river.

Shade river, right side,	6	212

There are three small creeks emptying in between Pond creek and Shade river, on the right side—Passing Shade river in high water

* A mile north of New Lancaster is a singular elevation called the *Standing Rock*. It is situated in an extensive plain and on the edge of a large prairie. The south-west front shews a bare perpendicular pile of rocks of about 500 feet in height. It may be a mile and a half around the base, and not more than about 30 by 100 yards across the top. The north-east side is tolerable easy of ascent, but I clambered up the south-west corner, and found it very difficult to ascend. In the edge of a projecting rock on the summit of this immense pile, looking to the south-west, and commanding a most extensive view of the surrounding flat country below you, is a *hole* of about four or five inches in diameter, a perfect circle, and evidently a work of art; not more probably than from 12 to 18 inches through, where it strikes the face of another rock. On approaching Lancaster from the west-ward across the prairie, the front and height of the "Standing Rock" has a romantick appearance, and forms a pleasant contrast with the level country through which you have been travelling.

keep pretty close round the left hand point, to avoid being thrown on dangerous rocks in the bend both above and below the mouth of the river. One mile below is a *sand bar*, channel at the upper end near the right shore, at the lower end near the middle of the river. A little farther 2 runs empty in opposite each other.

Two small creeks opposite each other, and two sand bars, one opposite the left hand creek, and the other a little below it, 4 miles below Shade river. Channel to the right of both.

No. 42, *Amberson's, or, Buffentin's island*, 10 | 222

Channel right side, close to the right point round the island.

V. Little Sandy creek, left shore, opposite No. 42.

Big Sandy creek, left side, 3 | 225

In the bend half a mile below Big Sandy, on the right shore, is a dangerous ledge of rocks; and a little farther down on the left shore is another ledge equally dangerous; to avoid both, keep as near the middle of the river as you can after passing Amberson's island. From below these rocks, the river winds to the right and grows very narrow, being not more than 140 yards wide.

Large sand bar, left side, channel right shore, 4 | 229

Oldtown creek, right side, 3 | 232

A creek right side, large sand bar left side, 1 | 233

Channel to the right of the bar or small island.

No. 43, *George's island, and sand bar*, 5 | 238

The channel runs near the upper point of the island on the right side of it, and when you get two thirds down turn short towards the right shore through the bar, leaving two large breakers to the left.

Big and Little Mill creeks, left side, 2 | 240

Two miles below a big run empties in on the right side.

Letart's rapids and No. 44 and 45, islands above them,	5	245

Channel past No. 44, is near the right shore, thence steer for the head of No. 45, keeping it to the left; thence keep one third over from the right shore until you pass the rapids, leaving the big rocks to the right.—Two miles below Letart's rapids is a sand bar on the right shore, and some snags below the bar.--A squire Sears lives at the rapids on the left bank and has a mill on the right shore: from hence the river winds to the right.

West creek, left, Dunham's run right side,	6	251

Channel near the left shore—a ferry just below.

A ripple, channel near the middle of the river,	5	256

About one mile below is another ripple, ch. right shore.

Sliding hill and creek, just below it, left side,	3	259
Nailor's Branch, right shore,	4	263
Leading creek right, coal bank left side,	5	268
Ten mile creek above Kanhawa, left shore,	3	271

(See MAP 5, page 97.)

No. 46, Eight mile island, channel right side,	3	274
No. 47, Six mile island, channel same side,	3	277

Just below is Kayger creek, right side--Here is a stratum of slate coal.

Campaign creek, right side,	3	280

This creek is so called from General Lewis's carrying on a campaign against the Indians, after the battle of Point Pleasant.

Great Kanhawa river, left side. (M. D.)*	3	283

* Seventy miles above the mouth of the Big Kanhawa and a little below the falls of that river are a number of salt works lately put into operation, and which yield an immense quantity of excellent salt. In August, 1810, there were 11 furnaces at work.

This is a considerable river of Virginia, 400 yards wide at its mouth, and might be taken for the Ohio, especially when ascending that river. By a portage of a few miles through the mountain which occasions the falls, a communication may be had between the waters of the Great Kanhawa and the Ohio, and those of James river, which falls into Hampton Roads, on the coast of Virginia, and is navigable for ships of 40 guns to Jamestown, and those of 125 tons go to Rocket's, one mile below Richmond.

POINT PLEASANT,

A small town situated at the confluence of the Great Kanhawa with the Ohio, commanding a handsome view of that river. It is a place of considerable embarkation for those

each containing 60 kettles, and making at the rate of from 35 to 50 bushels of salt daily, averaging in all about 400 bushels per day. Since which (Dec 1810) we learn there have been five furnaces more erected, and make an equal quantity with the others; hence we may calculate the quantity made now to be about 580 bushels per day, or 174,000 bushels annually; which they can afford at the works at 70 cents, 50 lbs to the bushel, and it can be freighted to Pittsburgh, 283 miles up the Ohio, for $1 50 per barrel, which will reduce it to the low price of *five dollars per barrel*; fifty, nay, in some cases one hundred per cent lower than we have been able to obtain Onondago salt. These salt furnaces are immediately on the beach or edge of the river, and extend on both sides for six miles distance. In the first place they have to dig about 10 or 15 feet through sand and mud, when they come to the rock, then the boring commences with a two and a half or three inch auger, with which they bore from 60 to 90 feet through the solid rock, passing perhaps several veins of fresh water in that distance, which is kept from the salt by means of tin pipes introduced into the holes from bottom to top and tightly caulked at top where they enter the *gum*, as it is called. This gum though made of a hollow sycamore, answers as a *coffer dam*, within which a man works through the mud and sand, while it sinks with him to the surface of the rock, where its lower edge is tightly secured all round, admitting neither mud nor water from below and extending upwards beyond high water mark. Into this gum enters the tin pipe introducing the salt water from its hidden reservoir. Into the gum pumps are then fixed, which are either worked by man or horse power, and the water conveyed from these in open troughs to the kettles, which are placed in a double row under a shed, and over a long hole cut in the ground, into which wood is cast for boiling them and evaporating the water. A fur-

descending the Ohio, from the western parts of Virginia, and may in consequence become a place of some importance.

Immediately below Point Pleasant, pass over to the right shore, to be ready for

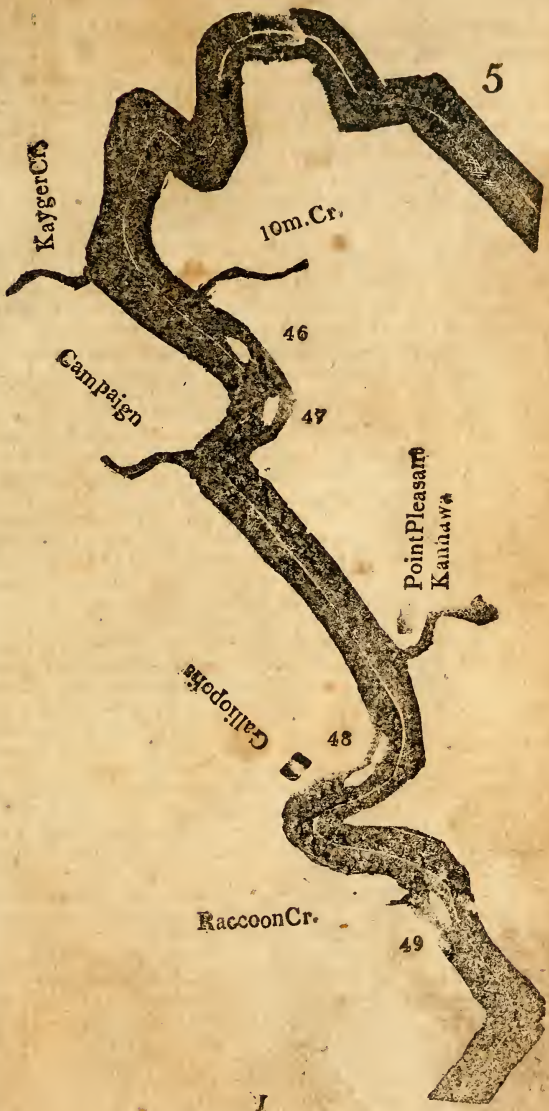
No. 48, *Galliopolis island*, 3 286

Channel left side, near the island at the upper end, when half way down it, the channel

nace of 60 kettles when ready for operation, costs about 1500 dollars, and four hands are sufficient, when the water is pumped by hand, to keep a furnace of this kind going night and day, besides indeed two or three engaged in cutting and hauling wood. The salt is conveyed to the Ohio down the Kanhawa river without difficulty; the navigation, 5 or 6 short rapids, and these not worse than those of the Ohio any where above the falls, excepted, is good, having gentle and deep water all the way. The banks of this river are composed of a black loose earth; the bottoms on each side are rich and extensive, and tolerably settled, except those large tracts owned by the heirs of the late General George Washington, which are held at ten dollars per acre, a price too high it is thought for advantageous purchases.

The great strength of the water at these works surprises us into thankfulness for the bounty of providence. From 90 to 130 gallons make a bushel of salt, while many of those of Ohio and Kentucky take from 500 to 700 and others from 700 to 900 galls. to make the same quantity. The works on Little Sandy in Kentucky, owned principally by Mr Grayson, have the strongest water, except those of the Kanhawa, of any that I have heard of, and it takes from 250 to 300 galls. of that water to make a bushel of salt. Thus, when there is the greatest need for oeconomy in living, owing to external distresses, arising from the world's wars of rage and madness, Providence has been kind enough to lead the ingenious hands of man through rocks as deep almost as the ocean, & as hard as adamant, where he has found in abundance the means of producing one of the most important necessaries of life at half the price hitherto paid for that article.

In some cases when the borer first entered the vein of salt water, it spouted up with great force twenty feet in height above the surface of the rock. It would appear from this circumstance, together with the astonishing strength of the water, that a rock of solid salt must be in the vicinity of such vein, and that its meltings had filled the reservoir almost to bursting for want of vent: Or otherwise, that the fountain of salt is situated among the Kanhawa mountains, through which issues a vein of water, receiving its salt particles as it passes, and thence finds its way among the crevices of the embowelled rocks to the spot where it is now fallen upon. In either case it is equally providential, equally fortunate to the citizens of the western country and to their rising posterity. In some places below the present works the rock has been perforated 200 feet without finding salt water.


5
Kayger Cr.
10m. Cr.
46
Campaign
47
Point Pleasant
Kanawha
Calliopolis
48
Raccoon Cr.
49

runs immediately to the left shore, thence over towards the town of

GALLIOPOLIS,

Which is situated on the right bank of the river, state of Ohio. A few years ago it contained 100 French families; the titles of their land proving invalid occasioned them to desert the town, which has since been much on the decline. At the lower end of the first point below Galliopolis, on the right hand, are some snags extending half across the river.

No. 49, *First island below Galliopolis*,	7	293

Channel past this island begins in the middle of the river, between it and the left shore, and bears towards the lower point of the island, opposite the end of which are rocks and snags in the middle of the river.

Racoon creek, right side, opposite No. 49,		
Meridian creek, left shore, a run below it,	8	301
(See MAP 6, *page* 100.*)*		
Eighteen mile creek, right side,	2	303
Swan creek, right side, (a run above it)	2	305
Little Guyundat creek, left shore,	1	306

The entrance of Little Guyundat occasions a bar just below its mouth called *Greenbury Bottom bar*, and this makes the ripple called *Straight Ripple*—The channel is to the right of the bar, about one third over from the left bank. About 2 miles below Little Guyundat on the left is a *Hanging rock*, and on the right is a stratum of potter's clay.

Federal creek, right shore,	7	313
Nine-mile creek, left side,	5	318
Seven-mile creek, same side,	2	320
Bluff & Tavern right side,	1	321
Big Guyundat, 80 *yards wide, left side*,		
(M. D.)	$5\frac{3}{4}$	$326\frac{3}{4}$

Here is a long and difficult ripple; the channel runs near the left shore above the creek, and when in full sight of its mouth, it crosses the river at nearly right angles, until near the right shore, thence it bears towards the middle

of the river—This ripple continues to a creek one mile below Guyundat.

Indian creek, right side,	3¼	330
Indian Guyundat, right side,	2	332
Ten Pole creek, left side, ¼ mile below I. G.		
Twelve Pole creek, a fine creek left side,	3	335
Great Sandy, or Tottery river, left side, (M. D.)	6½	341¼

Just above Sandy is a bar, channel in the middle of the river through the bar. Half a mile below is a large gut.

Great Sandy river is the dividing line between the states of Virginia and Kentucky.

Tottery is navigable with batteaux to the Ouasioto mountain. It is a long river, has few branches, and interlocks with Red creek, or Clenche's river, (a branch of the Cherokee)—Here the large reed or Carolina cane grows in great abundance, even upon the upland, and the winter is so moderate as not to destroy it.

A creek left shore, a run right shore, *(See MAP 7, page 102)*	8¾	350
Big Stone creek, right side,	3	353

One mile below, is a hanging rock, left side.

Ferguson's bar,	4	357

A good channel on the right shore. The water from this bar to one mile below Little Sandy is very shallow.

K. Little Sandy creek left side, channel middle of the river.	7	364

The French Grant is opposite Little Sandy in Ohio; it is a tract of 20,000 acres, extending eight miles on the river, granted by congress to the French settlers at Galliopolis, as some indemnification for the losses they had sustained; and 4,000 acres adjoining, granted to Mon. Gervis, for the same purpose. On this last tract Mr. Gervis has laid out a town called BURRSBURGH.

Hale's creek, right side,	12	376

6
18m.Cr.
Swan Cr.
Lit.Guyundat
Federal Cr.
Ind.Guyundat
Big Guyundat
Sandy R.

Little Sciota river, 30 *yards wide*, *right side*, 2 378

A ledge of rocks puts out here and extends half across the river—the channel at the upper end of the bar is near the left shore; at the lower end, close around the rocks.

Half a mile below Little Sciota is another bar extending also half way across the river; channel midway between the point of the bar and the left shore.—Just below this last bar on the right bank is *Stony Point;* and a little above it is every appearance of a body of iron ore.

Tiger's creek, *left side*, 7 385

Big Sciota river, *(M. D.)* 5 390

This is a large and gentle river of the state of Ohio, bordered with rich flats, meadows, or prairies. It generally overflows in the spring, and then spreads about half a mile, though when confined within its banks it is scarce a furlong wide. Besides having a great extent of most excellent land on both sides of the river, it is furnished with *salt* on an eastern branch, and red bole or Necunsia Skeintat. It is passable for keels, batteaux, &c. a considerable way, and for smaller crafts near 200 miles to a portage of only 4 miles to Sandusky, which empties into lake Erie, and at its mouth is large enough to receive sloops —The mouth of the Big Sciota river, according to Mr. Hutchins, is in N. lat 38° 43′ 28″

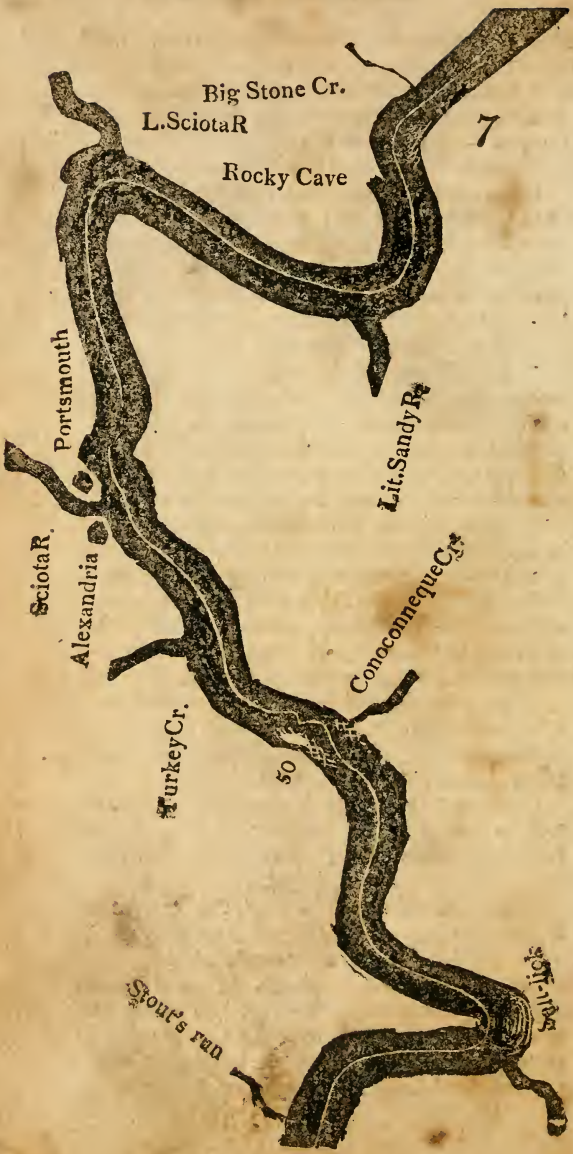
CHILICOTHE, in the state of Ohio, is situated on the west bank of Sciota, 47 miles by land from its mouth. *(See description, p. 115)*

ALEXANDRIA

Stands immediately below the mouth of Sciota, and

PORTSMOUTH

About half a mile above it. Both these villages are but young, (Portsmouth being the junior) and they progress but slowly; but in time may become, from their eligible situation, of considerable consequence. Goods des-


Big Stone Cr.
L.SciotaR
Rocky Cave
7
Portsmouth
Lit.SandyR.
SciotaR.
Alexandria
ConoconnequeCr.
TurkeyCr.
50
Stout's run

tined for the upper settlements on the Sciota, are deposited at both these towns, whence they are boated up that river in keels, periogues, &c.

Just above Portsmouth, are high hills topped with pine trees.

Turkey creek right, Conic hills left side, 5 395

Half a mile above this creek is the residence of major Belisle.

Conoconneque creek, left side, (Colgins) 9 404

No. 50, Willow island and bar—lie close to the right shore, between Conoconneque and a small creek on the right shore, called *Pond* creek. The channel begins half way between the island and left shore, then it bears off round a bar at the mouth of Conoconneque creek, thence it turns short to the left shore, to avoid the island-bar which reaches nearly across the river, it keeps the main shore for a small distance, and then takes to the middle of the river, the left shore being full of rocks and sunken trees.

About 3 miles below the above creeks and island, on the right shore, is an insulated mountain, 500 feet high.

A sand bar, about five miles below Pond creek—channel near the left shore.

Twin creeks entering close together, right side, 8 412

Salt Lick creek, left shore, 6 418

This creek empties in just below a short turn of the Ohio to the right; and near its mouth are some *salt furnaces*, in a little town called VANCEVILLE, at which are made large quantities of salt—From these salt works to Lexington it is 70 miles.

The best water here is in the middle of the river, both beaches being very rocky; but there is a good landing place in an eddy 400 yards above the creek, and also at the mouth of the creek.

In high water the rocks and eddy form a whirlpool.

Pond run left, Stout's run, right side,	5	423
A creek, right side,	5	428

Here the river is half a mile wide.

(See MAP 8, page 105.)

Graham's station, Kennedy's bottom, left side,	1	429
No. 51, Wilson's I. and Brush cr. right side,	5	434

Just below No 51, is a large log ; and between it and the right shore is a sawyer, which keep to the right.

ADAMSVILLE,

A small village situated on the right bank of the Ohio, just below the mouth of Brush creek, and opposite No. 51.

Sycamore creek, left side,	2	436

The channel from this creek to the two islands below is near the left shore.

Donaldson's creek, right side,	2	438
Two Islands, No. 52 left, Massey's No. 53 right,	4	442

Channel past these two island's is on the left, midway between No. 52 and the shore; after you pass them, bear for the lower end of Manchester, to avoid a sand bar on the left shore opposite Isaac's creek, which puts in one mile below the town, on the same side with it.

MANCHESTER,

Is a litle town pleasantly seated on the right bank of the Ohio, just below the foot of Massey's island, No. 53. It commands a charming view of the river.

Crooked creek, left side,	7	449
A run right side one mile below,		
Cabin creek, left side,	2	451

The river here turns to the right.

William Brooke's creek, left side,	4	455

A sand bar on the right shore; the best water is near, but not close to the left bank.

Madison's and the town of LIBERTY, *left side,*	2	457

8
Adamsville
Graham's
51
53
52
Manchester
Crooked Cr.
Isaac Cr
Bullskin Cr.
Eagle Cr.
Augusta
Charles T.
Limeston
Miami

Limetone creek, and the town of
MAYSVILLE, OR LIMESTONE, (K.) 1 458

This is the oldest and most accustomed *landing place* on the Ohio. The landing is good, and the mouth of the creek affords a safe harbour for boats. At the landing are several ware houses well accommodated for the storage of merchandise, wares, &c. these are kept by Messrs. January, Martin, and Chambers, whose obliging and accommodating dispositions, render the transaction of business with them safe and comfortable.—Their charges and commissions are considered moderate, and their attention strict and punctual.

Maysville is in Mason county, (K.) situated on the south side of the Ohio, and on the west side of Limestone creek. It stands on a lofty and uneven bank, and is not seen from the river until you are within two miles of the town. There is, however a great deal of business done here; it has about 70 houses, a post-office, several mercantile stores, and publick inns. Vessels of considerable burden have been built here, launched and taken down the Mississippi with success. It is 4 miles north-east of Washington, the seat of justice for Mason county.* It has an extensive rope walk, owned by Mr. John Armstrong.

* LEXINGTON is about 64 miles S. W. of Maysville—It is the largest and most flourishing town in the state of Kentucky, though not the capital of it. It is the seat of justice for Fayette county, and is finely situated in the heart of a well cultivated, thickly settled, and rich country on the north side of Town. Fork, a small stream which falls into the S. branch of Elkhorn river—It has a court-house, jail, market-house richly supplied with the produce of the adjacent country; 4 places of publick worship, a banking company, about 400 houses, many of which are handsomely built, and 2,400 inhabitants; 30 mercantile stores, several of which are large wholesale houses; a publick academy, and other well regulated schools; 2 printing offices, issuing weekly gazettes, one bookstore owned by Messrs. Maccoun, Tilford, & Co. and a book bindery by Mr Essex; a large duck manufactory, and another for manufacturing cotton and muslin; 4 large rope walks, 2 nail factories, and many other useful manufactories carried on with

CHARLESTOWN, *left bank*,	7	465
In the middle of the river opposite Charlestown, is a large sand bar; the channel is between the bar and the town, then crosses to the foot of the bar.		
Eagle creek right side,	1	466
This is the first water of any consequence below Limestone.		

spirit; all of which are duly encouraged by the body of the citizens, the only sure pledge of their success.

Lexington in fact is a place of great business, and the inhabitants seem peculiarly and happily calculated to enjoy their situation, and the hospitality and friendship of each other. This prevailing disposition in the people, makes the place very lively, and highly agreeable to strangers—It is 22 miles E S E of Frankfort, and about 335 by land W S W of Pittsburgh, lat. 38° 6′ N. lon. 85° 8′ west.

Near Lexington are found curious sepulchres full of human skeletons; and the remains of two antient fortifications, furnished with ditches and bastions, overgrown with large trees—A regularly walled well is also said to have been discovered by a person digging five or six feet beneath the surface; over the mouth of the well a large flat stone was found.

The foregoing observations were made in 1807, the improvements of Lexington since that time have been very great. It now contains according to the census for 1810, houses and 5,230 inhabitants. It has fifteen extensive rope walks and bagging manufacturies, which manufacture into ropes, rope yarn, and bagging, about twelve or fourteen hundred tons of hemp annually; each bagging manufactury has from fifteen to twenty-five little black boys spinning, from ten to twenty looms, black men weavers, four or five preparing the hemp, and two or three white men overseers. The rope walks have from ten to fifteen workmen about them; all as busy as nailers from sun to sun, winter and summer, each earning for his master, men and boys, at least one dollar per day. The quantity of hemp thus manufactured, when got into the eastern and southern markets cannot be worth much less than five hundred thousand dollars—Lexington has now (1810) four considerable cotton manufacturies, the newest and most extensive of which belongs to a Mr. Saunders, whose manufactured articles really do honour to our country, and to his industry and perseverance. Mr Daniel Bradford has lately established a wool carding and spinning machinery, and one or two others are in operation. Levett & Smith have established the oil cloth and oil carpeting business, which succeeds well. Lexington has a well regulated and extensive publick library, conducted by Mr David Logan, secretary and librarian, whose steady and vigilant attention to it gives life and credit to the institution. A second bookstore

Straight creek right side,	5	471
Opposite this creek is a sand bar, channel left shore.		
White oak creek, right side,	5	476
Bracken creek, left side,	3	479
Opposite this creek is a sand bar, channel left shore.		

AUGUSTA,

A small village at the mouth of Bracken cr.

has been recently established by Johnson & Warner of Philadelphia, and a third printing press by a French gentleman. The town has a publick theatre and a company of actors, these keep the lively part of the town lively, and sometimes raise the dull spirited. The stile of building in Lexington is handsome, the publick inns, of which there are but four, are conducted on a plan and stile of neatness which makes a man feel at home as soon as he enters them; all goes on like clock work, every man to his post late and early, and the landlord the first and last in every department. It is not uncommon to see 30 or 40 strangers sit down to a table, which is well supplied with every thing good and comfortable. The writer of this note speaks more particularly of *Postlewait's tavern,* having lodged there, and not being acquainted with the others but from information.—The town has bath houses, warm and cold, and neatly conducted; these are a great comfort to the citizens and strangers, and a source of health and cleanliness.

Mr. John Bradford, sen. is about erecting a machinery for spinning ropes by the power of steam, the plan of which he is the inventor. Mr. Bradford's mechanical genius is very considerable, and his labours in this way have been highly useful to the citizens of the town. He established a press in Lexington about twenty-two years ago, the second in the western country, many of the types for which he carved out of wood.

The origin of the name of the town seems to have arisen thus: A number of hunters had made the spot where the town now stands a kind of encamping ground—by whom and some others, the scite of a town was laid out in the woods, and while the proprietors were seated around a fire on blankets, deer, bear, and buffaloe skins, consulting with each other what to name the newly laid out town, a man arrived in camp with the news of the defeat of the British at the "*Battle of Lexington.*" The circumstance gave joy to their feelings, and they unanimously agreed to call their new town in the west, "LEXINGTON."—Thus the early history of Lexington—thus its present prosperous situation, from which we may calculate on its progress in manufactures, arts and sciences, its rise from infancy to manhood, and from manhood to a maturity of extent and greatness, which may not be exceeded by any inland town in the world.

Bullskin creek right shore,	5	484
Channel one third over from the left shore. Half a mile below this creek is a sand bar on the left shore, the channel is near the right shore.		
Indian creek, right side,	16	500
Channel about the middle of the river.		
Ten Mile creek, right shore,	10	510
Little Miami river, right side, (M D)	6¼	516¼
Just below the mouth of this river a small sand bar puts out on the right shore; the channel is on the left shore about half way to Columbia, then it crosses the river about two-thirds over towards the right shore—Thence to Cincinnati the channel continues near the right shore.		
Little Miami (or as Hutchins calls it Little Mineami river) has much fine land and several salt springs, high banks and gentle current, but it is too shallow for batteaux to navigate it, except in high water.*		

* Near the head waters of the Little Miami and within four miles of the falls of that river, are situated the *Yellow Springs* in Green county, 60 miles east of Cincinnati, 60 west of Chillicothe, 9 from Xenia, the county town of Green county, 17 from Dayton on the Big Miami, at the mouth of Mad river, and 9 from Springfield Champaigne county. The water of this spring is too *medicinally valuable* to remain unknown, yet such a place as the "Yellow Springs" is not known to more than perhaps one twentieth part of the state in which they are situated. Yet it has been a place of considerable resort for several years back, having at some seasons from one to two hundred visitants. At present, and for a twelve month back, there have been no general accommodations, hence the place is somewhat neglected. Yet the property is about to be purchased from the present proprietor general Whiteman by Messrs Baum and Ferguson of Cincinnati, who seem to know the value of the spring, and are determined to put it in order for the reception of visitants. They also calculate on erecting light running mills on the water issuing from the spring, there being a sufficient quantity for this purpose, and the water can have a fall of about 70 feet in the distance of 150 yards.

The quality of the water is diuretick, bracing, and invigorating to the whole system, peculiarly beneficial to all nervous and debilitated affections; the most obstinate rheumatisms have been completely removed by them; and wonderful cures of old and new sores have been performed by applying a kind of *jelly*, as it

(See MAP 9, page 114.)

COLUMBIA.

Is a small and pleasant village situated immediately below the mouth of the Little Miami river.

Crawfish creek, right side,	3	519½

Between Crawfish and Deer creek a large sand bar puts out from the left shore, which makes it necessary to keep well to the right shore below Columbia until you pass the bar.

Deer creek, right side,	4	523¼
Licking river, left side, (M. D.)	1	524½

is called, which is thrown out by the water, to the parts affected. One case of a cancer in the temple of a woman was nearly cured, but she was hurried away too soon by her friends who lived at a considerable distance from the spring. The water is drank plentifully, and the shower bath is freely made use of, in which way it is highly strengthening and invigorating, throwing out immediately a general glow of warmth through the whole system. The colour of the stones, wood, &c. over which the water runs, would seem to justify an opinion that it contains a considerable proportion of iron. The water throws out at times quantities of earth, which the people at the spring call *clay*, but which has every appearance of iron ore, except in its lightness. The mass of earth thus thrown out is immense, and it has formed a hill of 60 feet in perpendicular height, 150 yards across its widest part, where it forms the fourth of a circle, which fronts a beautiful limestone spring water rivulet passing at its base, and the two other sides come pointing to the spring in shape of a quadrant. The greater part of this mass of earth, of which there appears to be thousands of tons, makes, with burning and pulverising, an excellent *paint*, equal to any Spanish brown.

There appears to be something in the quality of this water that is at once singular and curious. It leaves the mouth of the spring in quantity sufficient to fill or pass through a hole of five or six inches in diameter, and at a rapid rate, and before it gets to the base of the hill, which it seems to have formed, it entirely disappears, nor are there any appearances of water issuing out at the bottom of the hill, one or two limestone springs excepted. I examined or tried to examine into the singular operation of this water as it passed down the hill, and almost concluded that the greater part, if not the whole of it changes its nature, and turns into a kind of moss, in the first instance, which is found all along its passage from the spring to where it disappears, and which is evidently formed by the water and the operation of the atmospherick air; this moss, which at first is as soft as down, in a more advanced state becomes gritty and more compact; and in a still

This is a considerable stream of Kentucky, navigable for about 70 miles, and toward its head the cane or reed grows in great plenty.

NEWPORT

A small town pleasantly situated just above the junction of Licking with the Ohio river—It has an Arsenal, or place of deposit, a magazine of publick arms, ammunition, &c. It is an elegant brick building.

CINCINNATI

Is handsomely situated on a first and second bank of the Ohio, opposite Licking river—It is a flourishing town, has a rich, level, and well settled country around it. It contains about 400 dwellings, an elegant court house, jail, 3 market houses, a land office for the sale of congress lands, 2 printing offices issuing week-

further advanced state, it begins to assume the form of a petrifaction, and actually goes into a solid rock, as appears from examining the face of the hill in different places where the water has from time to time ran down, and changed its channel as it happened to be turned by chance or accident. In one place particularly in the face of the hill, is a rock thus formed of about eight feet in length and three feet broad, and not more than about 6 or 8 inches thick, and thinner towards the edge. This rock when broken gives the same appearance of the fine dust, except that it is harder from having undergone a state of petrifaction. Twigs, branches of trees, leaves, &c. are found completely petrified throughout the hill.

The summit of this *Spanish Brown* hill is nicely clothed with a growth of young red cedars, which give it a handsome and romantick appearance. The country around the spring is of second rate white oak land, and all level, with several extensive prairies within two or three miles. There is a post office within three quarters of a mile of the spring, kept by a Mr. Miller. A Mr. Davis has resided at the spring and kept accommodations for a few visitants for the last twelve months, but is about removing. A Mr. Brodrick formerly lived there, but he moved about twelve or eighteen months ago, (now Dec. 1810) to Franklinton, on the Scioto river, 49 miles from the springs and 45 above Chillicothe, where he keeps publick house. While Mr. Brodrick resided at the spring he expended a large sum of money with others in digging for silver ore; they sunk twenty or thirty pits adjacent to the spring for this purpose, but without any other effect than the finding some sulphur adhering to spars, or a kind of flint stones.

ly gazettes, 30 mercantile stores, and the various branches of mechanism are carried on with spirit—Industry of every kind being duly encouraged by the citizens, Cincinnati is likely to become a considerable manufacturing place; it is 82 miles N. by E. of Frankfort, and about 380 by land S. S. W. of Pittsburgh, N. lat. 39° 5′ 54″ according to Mr. Ellicott, and W. long. 85° 44′. While the now state of Ohio continued under a territorial government, Cincinnati was the seat of publick business, and it continued to be so for several years after that state was received into the Union, which was in the year 1802. It was afterwards removed to Chillicothe. It is the principal town in what is called Symms's purchase, and is the seat of justice for Hamilton county, Ohio. It has a bank issuing notes under the authority of the state, called "*The Miami Exporting*

In the bottom of a small rivulet half a mile east of the spring are two circular wells sunk in the solid rock, the one about three and the other seven or nine feet deep, and eight feet in diameter; the one is to be seen on passing by, they being on each side of the road, the other is filled up. The deepest is said to have been cleared out 10 or 15 years ago, and a *plate or ball of copper* was found among the stones and dirt thrown out.

What are called the *Cliffs* of the Little Miami, four miles east of the Yellow Spring, is a place of great natural curiosity. The rock through which the river passes for half a mile appears to have been cleft asunder by some great shock of nature, and now lets the water pass in a channel not more, in one particularly singular place, than three or four feet wide, and so deep in the lowest stage of the water that soundings have been made for fifty feet without finding bottom. From the top of the rock, to the surface of the water is a distance of about 50 or 60 feet, and so narrow at top that it can be leapt over in one place by an active man. A gentleman from the state of Kentucky on a visit here with some ladies, had the temerity to try this leap, and had the good fortune to escape with his life, for it being broader than he calculated on, he caught on the opposite side with one leg and arm to a root or bush, and with difficulty escaped a fall of 60 or 70 feet perpendicular, among huge rocks and roaring water. On approaching this place you are at once struck with such a degree of timidity that you are glad to hold to the trees and twigs while peeping into the gulf below, and after a few minutes anxiously searching for the current of the river, winding and roaring through its narrow and rocky bed, you feel relieved in making a safe retreat from the brink of the dark and awful abyss.

Company"—The healthiness and salubrity of the climate; the levelness and luxuriance of the soil; the purity and excellence of the waters; added to the blessings attendant on the judicious administration of mild and equitable laws; the great security in the land titles; all seem to centre in a favorable point of expectation, that Cincinnati and the country around it, must one day become rich and very populous, equal perhaps, if not superior to any other place of an interior, in the United States. The scite of Fort Washington is near the centre of the town; it was a principal frontier post—It is now laid out in town lots.

Two considerable cotton manufacturies have been lately established in Cincinnati, one by Mr. Hurdus, and another by Messrs. Baum & Co. and others are about to be established by an extensive company forming for that purpose. The citizens of Cincinnati, and those of the adjacent country seem to have a large share of a publick and enterprising spirit, which is bent at this time towards the establishment of domestick manufacturies, and the forming of companies for the collecting and transporting to market the surplus produce of that extensive and fertile country. A company of this kind has already formed itself at Hamilton on the Big Miami, and one on the Little Miami, and another extensive company is about forming at Cincinnati for the same purpose. According to the census of 1810, Cincinnati contained 1,217 males, 1,006 females—total 2,283 souls.

Mill creek, right side,	1½	526
A large sand bar,	3	529

The channel close to the right shore is safe, but it is very narrow.

North Bend,	10	545

In low water here is a great sand bar, channel right shore—From the North Bend to the Great Miami, the channel is in the middle of the river, there being large sand bars on both shores.

9
Columbia
Cincinnati
Newport
Miami R.
Lawrenceburgh
54
55
56
Port William
Kentucky R.
West Port
57
58
60
59
Jeffersonville
Louisville

Great Miami (or* Mineami*) river right side,* *(M. D.)*	6	551

At the mouth of this river is a sand bar, channel on the left shore; and about 300 yards below is another sand bar on the same side, channel midway between the bar and the right shore.

The great Miami or Rocky river, has a very stony channel, a swift stream, but no falls: is 200 yards wide at its mouth; at the Pickaway towns, 75 miles up, it is contracted to the breadth of 30 yards; it is nevertheless, naviga-

* Before we quit the state of Ohio (at the western boundary of which we have now arrived,) it may not be amiss to give a short description of Chillicothe, the former capital, (the seat of government being removed to Zanesville) for which we are indebted to a work just published, entitled a Western Tour from Philadelphia in 1807.

CHILLICOTHE, which signifies *town* in the Indian dialect, is most beautifully situated on the banks of the Scioto, about forty five miles by land, and nearly seventy following the meanders of the river from its confluence with the Ohio, which it joins between Portsmouth and Alexandria—In all that distance, the river has a gentle current, and unimpeded navigation for large keels, and other craft of four feet draught of water—It continues navigable for smaller boats and batteaux upwards of one hundred miles above the town towards its source to the northward, gliding gently through a naturally rich, level, and rapidly improving country—The situation of the town is on an elevated and extensive plain of nearly ten thousand acres of as fine a soil as any in America, partly in cultivation, and partly covered with its native forests.—This plain is nearly surrounded by the Scioto, which turning suddenly to the N. E from its general southerly course, leaves the town to the southward of it, and then forms a great bend to the eastward and southward.

Water street which runs about E. by N. parallel to the Scioto, is half a mile long and contains ninety houses—It is eighty four feet wide and would be a fine street, had not the river floods caved in the bank in one place near the middle almost into the centre of it. There is now a lottery to raise money for securing the bank against any further incroachments of the river. Main street parallel to Water street, is one hundred feet wide, as is Market street, which crosses both at right angles, and in which is the market house, a neat brick building eighty feet long—The court house in the same street, is neatly built of free stone on an area of forty five by forty two feet, with a semicircular projection in the rear, in which is the bench for the judges. It has an octaganal

gable for loaded conoes 50 miles above these towns. The portage from its western branch into the Miami of lake Erie, is five miles; that from its eastern branch into Sandusky river, is nine miles.

LAWRENCEBURGH, *right bank.* 3 554

This town stands in a low rich bottom; it is the seat of justice for Dearborn county, Indiana territory.

belfry rising from the roof, painted white with green lattices, which is an ornament to the town, as is the small plain belfry of the presbyterian meeting house, a handsome brick building in Main street; in which street also is a small brick methodist meeting house. These are the only places of publick worship in the town, if I except the court house which is used occasionally by the episcopalians and other sects.

The whole number of dwelling houses as I counted them in Chillicothe is two hundred and two, besides four brick, and a few framed ones now building. I reckoned only six taverns with signs, which small proportion of houses of that description speaks volumes in favour of the place. There are fourteen stores, a post office, and two printing offices which each issues a gazette weekly

The scite of the town being on a gravelly soil, the streets are generally clean—The houses are of free stone, brick, or timber clapboarded, the first of which is got in the neighbourhood, is of a whitish brown colour, and excellent for building—They are mostly very good, and are well painted. On the whole, I think Chillicothe is not exceeded in beauty of plan, situation, or appearance by any town I have seen in the western part of the United States.

There is here a remarkable Indian monument in Winn Winship esqr's garden, fronting Paint street, in the very heart of the town. Like that at Grave creek, it is round at the base, about seventy or eighty feet diameter, but differs from it, by being round instead of flat on the top, which has an elevation of about thirty feet perpendicular from the level of the plain. It is formed of clay, and though it has been perforated by the proprietor nothing has been found to justify the common opinion of these mounts having been barrows or cemeteries. They talk of having it levelled, but I think it a pity to destroy any of the very few vestiges of aboriginal population which this country presents to the curious and inquisitive traveller.

From a steep hill about three hundred feet perpendicular height, just outside the western extremity of the town, is a most charming view, of the streets immediately below, under the eye like a plan on paper; Then the Scioto from one hundred to one

Loughry's creek, right side,	8	562
Here is a great bar, channel close to the right shore.		
No. 54, Grape or Loughry's I. 1 mile long,	4	566
Channel on the left shore.		
Chambers's bar,	4	570
Here is also a very hard ripple, channel close in to the right shore, under a high bank.		
Gunpowder creek, left shore.		
At the mouth of this creek is a rocky ripple; channel close to the left shore until near the creek, then it runs into the middle of the river.		
Big Bone Lick creek and bar, (M D)*	13½	583½

hundred and fifty yards wide, winding on the left, with some low hills about two miles beyond it, terminating the view to the north-east; while to the eastward and westward, as far as the eye can reach both ways, is spread a country partly flat, and partly rising in gentle swells, which if cultivation proceeds in equal proportion to what it has done since Chillicothe was first laid out about ten years ago, must, in a very short time present one of the finest landscapes imaginable.

A two story brick academy has been erected since the above was written, and is under the direction of the Rev. Mr Wilson. A cotton manufactury was put into operation in the fall of 1810, by Messrs Lamb and Williams. A third printing office was established here in the fall of 1809.

* Animals bones of enormous size have been found here in great numbers. Some skeletons nearly complete were not long since dug up 11 feet under the surface in a stiff blue clay. These appeared to be the bones of different species of animals, but all remarkably large. Some were supposed to be those of the mammoth, others of a non-descript. Among these bones, were two horns or fenders, each weighing 150 pounds, 16 feet long, and eighteen inches in circumference at the big end; and grinders of the carnivorous kind, weighing from three to ten and an half pounds each; and others of the graminivorous species, equally large, but quite differently shaped, being flat and ridged. Ribs, joints of the backbone, and of the foot or paw, thigh and hip bones, upper jaw bone, &c &c. were also found, amounting in the whole to about five tons weight.

These bones were principally discovered by Dr Goforth and Mr Reeder of Cincinnati, who sent them by water to Pittsburgh, with an intention to transport them to Philadelphia, and make sale of them to Mr. Peale, proprietor of the museum of that city.—

Channel close to the left shore; from thence to the Nine Mile island you have fine water to ride in.		
No. 55, A small willow island, channel left shore,	20	503½
No. 56, Nine Mile island,	12	515½

They were however while in Pittsburgh, discovered by an Irish gentleman, a traveller, who purchased them, reshipped them down the Ohio, and thence to Europe, where no doubt he will accumulate a handsome fortune by exhibiting them to the different courts of that continent.

Of the history of the mammoth we are much in the dark. Of animals having once existed carrying these enormous bones, there can be no doubt. Their present existence is much doubted; and the only proof we have to the contrary, is a curious tradition of the Indians, handed down to them by their fathers, which being delivered by a principal chief of the Delaware tribe to the governor of Virginia during the American revolution, is recorded in the following words:—"That in antient times a herd of these tremendous animals came to the Big-bone licks, and began an universal destruction of the bear, deer, elks, buffaloes, and other animals which had been created for the use of the Indians: that the Great Man above, looking down and seeing this, was so enraged, that he siezed his lightning, descended on the earth, seated himself on a neighbouring mountain, on a rock of which his seat and the print of his feet are still to be seen, and hurled his bolts among them till the whole were slaughtered, except the big bull, who presenting his forehead to the shafts, shook them off as they fell; but missing one at length, it wounded him in the side; whereon, springing round, he bounded over the Ohio, over the Wabash, the Illinois, and finally over the Great lakes, where he is living at this day."

Jefferson's Notes on Virginia.

There are places at the Big Bone Lick, where the salt water bubbles up through the earth, that are rendered a perfect quagmire, admitting nothing heavier walking over them than geese or other light web footed fowl. Cattle dare not venture nearer than to their edges. One of these places appears bottomless, for no soundings have ever been found; throw in a ten feet rail endwise and it buries itself without any other force than its own weight; another embraces near a quarter of an acre, over which grows a very fine and short grass. May it not be reasonable to account for so many of the mammoths bones being deposited at this place, by presuming that in their seeking the salt water, and venturing a little too far, or otherwise that their own enormous weight pushing them forward too far for recovery, and sinking, thus were buried one after another to the number we now find their remains. The places where their bones are now found are

Here you must keep to the left shore, and immediately below, bear over towards the right shore, and keep close in with the high bank until you are past the second brick house; thence to the mouth of the Kentucky river, 3 miles, you have good water.—Five miles below No. 56, is a large sandbar, channel on the right shore.

Kentucky river *(M. D.)* 12¼ 627½

Gives name to the state it intersects, flows through a country of fine land, is navigable during the seasons of high water for loaded boats about 200 miles; it is ninety yards wide at its mouth and also at Boonsborough, 80 miles above.

At the mouth of this river are two small towns, one below and the other just above its mouth—the latter is called

tolerably hard from filling up by the washings of the small stream which runs through them, and from having been much dug up and the mud exposed to the sun

Mr. Colquohoun, a Scotch gentleman, resides at, and owns this singular spot of ground, and has two extensive salt furnaces at work, which are able to make about 60 bushels per day, notwithstanding the weakness of the water. Mr. Colquohoun has been at much labour and expense in fixing his furnaces in a superior stile, particularly in the retention of the heat, and saving of fuel. His kettles are of an oblong square, coming to about half the size at bottom that they are at top; they hold about 12 or 15 gallons, and are fixed close together in a double row, having their edges covered with sheet lead lapped down closely on all sides, so as to prevent any heat from escaping; the fuel is introduced into a grated furnace whose mouth is closed by an iron door—The kettles rise gradually from the front to the chimney, so as to occasion a sufficient draught of air. The first kettle in the furnace is round and contains about 100 gallons, and as this receives the greatest degree of heat, and evaporates the water much faster than the smaller ones, they are partly supplied from it after the water has boiled down considerably, and the back small kettles are supplied from those near the front. The kettles are filled with the salt water in the first instance from a wooden pipe running over the middle of the furnace, having spoil holes on each side; this is supplied by a pipe from the general reservoir filled from the leading troughs.

Mr. Colquohoun was engaged (Sept. 1810) in boring for salter water, and had got 150 feet through the solid rock with an inch and half augur, and was determined to bore 50 feet further. If

PORT WILLIAM,

Which, from its situation, as well as the village opposite it, may yet become a place of consequence.*

A large bar on the left shore, 5¼ 633

he failed here, to try two other places, embracing the three important points of the tract where the salt water was supposed to be embowelled.

Pigeons are seen here in thousands, in the proper season, and the noisy paroquet in considerable flocks. The pigeons seemed to be crowding on trees nearest the pond of salt water, as if wishing to get at it; I saw none drinking, and am ignorant whether they give salt water the preference. It is not uncommon to find large "*Pigeon Roosts*," in the neighbourhood of Salt Licks, which distinguish themselves by the old timber being stript of its limbs and deadened, and young timber springing up in its place. —There is something interesting in the very singular manner of the pigeons crowding together in such immense flocks as to break down considerable trees, and crushing themselves to death by the breaking and falling of the limbs on which they light, and may be more spoken of hereafter.

The Big Bone Lick is in the state of Kentucky, 20 miles from Cincinnati, on the road leading from that town to the falls of Ohio. The land about it is flat and cold, with scrubby timber, and there is no cleared ground in view of the Lick, not even a garden, notwithstanding, it is worth a visit to the curious, and the superior intelligence and hospitality of its worthy proprietor makes such a visit well paid for. The back water, in the very high stages of the Ohio, has been known to inundate this place, and extend for some distance above it.

* Frankfort, the seat of government for the state of Kentucky, is situated on the east side of Kentucky river, about 60 miles from its mouth. It contains about 140 houses, three printing offices, one bookstore, a Circulating library, and book bindery; 18 mercantile stores, a state bank established in the fall of 1807. The state legislature meet here annually, and sit during the winter months. The town is improving fast in buildings, manufacturies, &c.

There have been a number of vessels of burden built here and freighted with the produce of the country, to New-Orleans, West India islands, &c. A few miles above Frankfort, on the Kentucky river, are two considerable Vineyards, which are likely to prove successful in the manufactury of good wine

Frankfort is seated in a flat or plain, under a considerable hill to the N E while the Kentucky river runs around it to the S. W. in the form of a half moon. Part of the plain to the N. W of the town is subject to inundation, and consequently not built on. It used to be a stagnant pond, but general Wilkinson, when sta-

Channel close to the right shore.

From Kentucky river to Westport you have fine water, and a good settlement, and the sight of an ingenious machinery for carrying water from the river to a farm house on the bank.

WEST PORT	50	683

Is situated on a very high bluff on the left side of the river, and it is more remarkable on that account than for any thing else, there being but two or three houses in the place.

tioned at Frankfort about the year 1795 6, dug ditches through it and drained it of its noxious effluvia; the same practice has been continued by the inhabitants and the health of the citizens preserved The river at Frankfort has an appearance of having left its old bed, which may have run through a pleasant valley or glen (now a fine meadow) between the hill back of Frankfort and that whose point comes to the river just below town, and obliquely opposite the hill on the S. W. side of the river, where the fracture by some great convulsion of nature may have taken place. This conjecture is formed from a slight view of the place, we leave the hypothesis for further examination by naturalists. On the S W. side of the river opposite the upper end of the town is an extensive bottom. called *South Frankfort*. It is not yet built on.

The river at Frankfort is narrow, with bold banks of lime stone rock admirably calculated for building, running in horizontal veins of from six to twelve inches thick; it has been known to rise 50 feet perpendicular in 24 hours. The bridge now erecting at Frankfort will add facility to the commerce of the town. It is building on the plan of judge Finley's *chain-bridge*; will cost about 25,000 dollars, is 334 1-2 feet span, having one pier in the middle of the river 65 feet in height; whole length about 700 feet, and 18 broad The two chains for this bridge were made at Pittsburgh, by Mr. Thomas Hazleton, and weigh about 12 tons, of inch and a half square bar. Much difficulty has been experienced in getting a foundation for the western abutment, arising from a kind of quick sand and water rushing in at bottom upon the workmen as fast as they could discharge them at top with pumps and buckets worked night and day.

Frankfort has a well conducted penitentiary, in which the criminals of the state work at various mechanical branches, and at labour, during their term of confinement. I saw a variety of handsome stone and marble work in the yard, among which some elegantly wrought tombs were the most conspicuous The marble slabs are very handsome, having variegated veins running through them, and which bear a high and beautiful polish; these are brought from a marble quarry 25 or 30 miles distance.

Messrs. Hunter and Instone have recently got into operation in

No. 57, *Eighteen Mile island, channel right shore,*	2	685
No. 58, *Twelve Mile island, channel same side,*	6	691
No. 59, *Six Mile island, and No.* 60, *Goose island,*	8	699

The channel runs between these two islands.

Frankfort an extensive bagging manufactury, in which about 25 hands, blackmen and boys, are busily engaged, spinning, weaving, &c. At the end of this and immediately on the bank of the river, the same gentlemen have erected a large ware house for the storage of goods, which centre here from different parts of the state to descend the Kentucky river to the Ohio A bagging manufactury was burnt down at Frankfort about twelve months ago, by design, it was conjectured.

An extensive rope walk was erecting (Sept. 1810) at the edge of the town, calculated to do business largely. And a steam boat, that is, a large boat to be propelled by the power of steam, was on the stocks a little above town. She is intended for the trade of the Ohio and Mississippi rivers.

The buildings of Frankfort, are principally of brick, and of a handsome stile The state house is a large three story stone building, and stands in the middle of a large yard, and like too many *publick* things, appears much neglected for want of repairs and cleanliness. The new bank is a handsome brick building, and stands in range with the new bridge and the state house.

A mile below Frankfort there is a saw and grist mill in the river, which in low water does a good deal of business, but it is not uncommon to see it completely covered by the floods of the river, to withstand which it has no roof and is open on all sides, and heavily loaded down on the corners and in the middle of the frame at top with piles of stones. The mill is owned by a Mr. Hawkins Boats pass it through a chute by lifting a few boards at its head, which when replaced, form a dam for the mill.

With some difficulty the Kentucky river can be navigated from Frankfort with light flat bottomed boats to the Ohio, in the lowest stages of the water, but for about eight months in the year the navigation is very good.

Two miles below Frankfort there is a bank of fine white sand thrown up by the river, said to be well calculated for the manufacture of glass. Mr. Greenup, former governor of Kentucky, has it in contemplation, it is said, to establish a glass house at or near this place; and the establishment of a brew house is talked of by the citizens of the town Thus go on the improvements of interior America, whose inhabitants begin to feel and act like the citizens of an independent nation, possessing an extent of country capable of producing, from the luxury of its soil, and variety of climate, *every thing* which ought to make a people happy and independent, of all the venomous combinations of maddened Europe.

Four miles below these two last islands, and two above Louisville, there is a large bar near the left shore, which extends near one third across the river. After passing this bar, if you mean to land at Bear Grass creek, you must pull over for the left shore, so as to prevent your being drawn into one or other of the schutes over the Rapids.

(See MAP OF THE FALLS, page 124.)

Bear Grass creek Landing, left side, 6¼ 705¼
(M. D.)

This creek is just above the rapid descent of the falls. At one of the most dangerous places to the navigator of the Ohio, nature, in her wise and providential works, has been kind enough to place one of the safest and best harbours that is to be found on the whole course of that river. The current itself seems to be diligent in directing the vessel to this spot for safety, and in keeping it out of the *Indian schute;* which, were it not for the experienced and expert management of good pilots, would be a very hazardous passage.

This harbour affords 12 feet water in the driest seasons, from the mouth of Bear Grass creek down to the middle of Corn island No. 61, and extends a considerable way out into the river.—Vessels therefore of any burthen may lie here in safety. Should they even get loose from their cables or fastenings, there is no danger of their being carried off by the current.

There appears to have arisen a difference of opinion respecting the navigation of the falls: The following letter and certificates, addressed to the editor on the subject, will, we hope, put the matter in a proper point of view.

JEFFERSONVILLE, Indiana territory, February 19th, 1809.

Sir,

We wish an error inserted in the "Navigator of the Ohio" to be corrected, either by publishing the certificates below, in the Navigator which you may print for the present year, or in the Almanack if you print one at Pittsburgh. It certainly is proper that those who descend the Ohio should be apprised of the most eligible places to land at, and likewise which side of the river is

Falls of Ohio
Clarksville
Silver Cr.
INDIANA TER.
Cane run
Jeffersonville
64
63
62
61
Shippingsport
KENTUCKY STATE
BearGrassCr.
Louisville

safest to pursue the channel. It is stated to be better for boats to land at low water at the mouth of Bear Grass, at Louisville, in preference to Jeffersonville, on the Indiana shore, for the purpose of taking the Falls. It is notorious that the current is altogether on the Territorial shore, the harbour commodious and safe at Jeffersonville, and that the only schute through which vessels can go over the falls is on this shore, which is called the Indian schute. When boats land at or near the mouth of Bear Grass, they are obliged to cross the river, which is very laborious, to take the Indian schute. The certificates of gen. G. R. Clark and col. Armstrong, who are well acquainted with the river, and of James Patton, who was a pilot for a considerable time, will place the subject in a proper light before the publick.

My long residence at the falls of Ohio, makes me well acquainted with its situation. The main channel runs between the Six Mile island and the Kentucky shore, and inclines fast to the Territorial shore that is bold and deep to the landing place at Jeffersonville, which is good and easy, on a gravel beech. The channel bears off to the head of the schute which runs on the same side. It is a strait and easy course to the mouth of Bear Grass, which is a good harbour in winter ; but when the river is navigable it is much easier to start from Jeffersonville than from the Kentucky shore, for it is with hard labour at the common stage of the water to reach the schute, which crafts are obliged to go. When crafts land at Jeffersonville, just push off from the shore and they will float down to the head of the main schute, which is the only possible one at common and low water. When the water is so low that boats must be unloaded, the loads can be hauled on cheaper terms on the Territorial side than on the Kentucky. G. R. CLARK.

February 14*th*, 1809.

Whereas an erroneous opinion has been taken up by the author of the Ohio Navigator, relative to the passage of the falls of Ohio ; wherein he directs boats to keep close to the Kentucky shore, stating that the harbour on the opposite side was unsafe. Being in command at the garrison where Jeffersonville now stands, for five years, and during that period having passed the rapids at every stage of the water, I can hazard nothing by asserting

that the channel is near the Territorial shore, and at the upper end of Jeffersonville there is a bold shore and deep water, where boats of every description may land with safety, and from whence they may with ease be conducted into the main schute or channel.

JOHN ARMSTRONG.

JEFFERSONVILLE, *October 12th*, 1808.

I do certify, that the harbour landing at Jeffersonville, in low water, is equal to any on the Ohio, either for flat boats or ships of any burthen, and much easier to row out to take the rapids.

Given under my hand, this 3d day of February, 1809.

JAMES PATTON.

We deem it unnecessary to say any thing farther on the subject, as the above certificates, given by men whose characters are well known in the western country, and who are actuated from no other motive in giving them than a wish to give useful information to those who descend the river, are in our opinion sufficient to do away the erroneous impression made on the publick by the Ohio Navigator. We could procure numerous certificates from respectable individuals were it necessary, but we conceive those given need no corroboration, and on the faith of them, those who descend the river will from their own observation experience their truth and correctness.

AARON BOWMAN,
JOHN THOMPSON.

THE RAPIDS OF OHIO

Are occasioned by a ledge of rocks which extend quite across the river, and are hardly to be perceived by the navigator in times of high freshes, unless by the superior velocity of the boat, which descends over them at the rate of from 10 to 13 miles an hour. When the water is low, the greater part of the rock becomes visible, and it is then that the passage becomes dangerous.

There are three channels or passes through the rapids: The course north or right of No. 62 or Goose island, called the *Indian schute*, is the main channel, but it is not passable in times of high water. The course between Nos. 62 and 63, Rock and Goose islands, called the *Middle schute*, is a safe and easy passage in all situations of the water above the middling stage. The pass between

No. 63 Rock island, and the Kentucky shore, called the *Kentucky schute*, is lost in Rock harbour, and is passable only in time of high water.

Near the bottom on the left side of No. 63 is a fine mooring place for boats, called *Rock Harbour*. It is opposite the upper end of Shippingport, and has water enough at all seasons for vessels of any burthen.

No. 64, Sandy island, may be passed on the right in high water only. The left or south pass is the main channel. From No. 64, to No. 63, is excellent mooring ground, and water enough for vessels of any tonnage.

The pass south of Corn island No. 61, and the Kentucky shore, is passable only in time of high water.

From the great danger in passing the rapids, the courts of Louisville and Jeffersonville have been very careful to appoint experienced and trusty men as pilots, who can always be had at a moment's warning to conduct boats and vessels over them ; and from a little ambition shewn by the pilots of both places to excel in their occupation, accidents, arising from the want of either skill or care, very seldom happen.

In levelling the descent of the rapids, they have been found to be 22½ feet in two miles, the distance from Bear Grass creek to the foot of the falls.

Two miles above the rapids the river is deep, and three quarters of a mile broad ; and in low water the channel is contracted to the breadth of 250 yards.

LOUISVILLE

Is situated at the mouth of Bear Grass creek and extends down the Ohio to opposite the middle of Corn island No. 61. It stands on an eminence of about 70 feet in heigth, which gently descends to a narrow plain along the river side in front of the town. From the lower end of the town the brow of the eminence takes its course to the Ohio opposite Sandy island No. 64, leaving a high plain between it and the river. It contains about 250 houses, a printing office, several mercantile stores and warehouses, a post office, is a port of entry, and the seat of justice for Jefferson county (Ken.) Lat. 38° 8′ N.

Louisville has several rope walks extensively carried on. Messrs. Anderson and Gwathmey had a valuable bagging manufactury, but which was burnt down by fire in December 1810, by design, it is supposed. This is the

second loss of the kind these gentlemen have experienced within eighteen months.

There have been a variety of circumstances which have operated against Louisville, and which have kept the improvements of the town constantly on the back-ground, notwithstanding its superior and commanding situation, for a manufacturing and commercial town. These circumstances, let them have arisen from what they might, are beginning to dispel, and like the sun after having been enveloped for a length of time in clouds and mists, and by degrees breaking through them, shines forth with redoubled vigour.—Such we believe and hope to be the situation of Louisville.

The river opposite Louisville is 1 mile and 25 poles wide, and commands a most charming view both above and below for a great distance, and the eye is carried over an extent of level country, terminated by the hills of Silver creek, which are five miles distant.

A canal has been proposed to be cut on the Kentucky side, to commence a little below Bear Grass creek, and open below Shippingport, a distance of 588 perches, or one mile and three quarters and twenty-eight perches. The accomplishment of this object indeed would be a happy event to the trade of the Ohio. The highest ground through which the canal would have to be taken, would not exceed 29 feet and its average depth would be 20 feet 6 inches. The route throughout is a stiff clay, lying upon a bed of rock not exceeding 40 inches higher than the floor of the canal The canal is calculated sufficiently capacious for a ship of 400 tons, and this would afford a column of water greater than 3 feet by 24, during the lowest stages, and 24 feet fall.

From the known enterprising disposition of the Kentuckians, we have little doubt but this contemplated canal will be completed in a few years. If encouragement be wanting, we cannot see why the legislatures of Virginia, Ohio and Pennsylvania should not throw in their strength to accomplish an object which would doubtless prove very advantageous to the citizens of each of those states, as well as to the state of Kentucky.

JEFFERSONVILLE.

The following description of Jeffersonville, and the division of the territory in which it is situated, was written by

some friends of that place and forwarded to us about 18 months ago.—(now Dec. 1810.)

By an act passed at the last session of Congress, the territory of Indiana is bounded by the Wabash as far as Vincennes, thence a due north course to the Michigan territory, by that territory on the north, the state of Ohio on the east, and the Ohio river on the south. The territory is divided into four counties, viz. Knox, which extends from the western boundary line to within a few miles of Blue river; Harrison, from thence to within 10 or 12 miles of the falls;—Clark, from thence up the Ohio to opposite the mouth of the Kentucky river, and Dearborn, from thence to the Ohio line—Vincennes, the present seat of government of the territory, is the seat of justice of Knox county; Corydon, is the seat of justice of Harrison county, situated about 100 miles east of Vincennes, and 26 west of Jeffersonville—Jeffersonville is the seat of justice of Clark county, and Lawrenceburgh near the mouth of the Big Miama, is the seat of justice of Dearborn county;—these are the only towns in the territory.

This county (Clark) was established in the year 1801—the whole number of its inhabitants may be reckoned at present at 3000 or 4000—the number of voters, who consist only of freeholders, are about 350.

Until the late purchases made by governor Harrison of the Indians, the grant made by the state of Virginia to gen. George R. Clark and the other officers and soldiers of the Illinois regiment, consisting of 150,000 acres, was the only tract of country in the county belonging to the citizens of the U. States, the balance belonging to the Indians. As a tribute of respect to gen. G. R. Clark, to whom the acquisition of this territory to the U. States may be ascribed, the legislature have named this county after him. The soil and productions of this country may be considered almost in every respect similar to that of Kentucky. Corn, pork, beef and Irish potatoes, form our principal articles of exportation.

Jeffersonville is situated on the north west bank of the Ohio nearly opposite to Louisville, and a little above the commencement of the great falls—the town was laid out in the year 1802, since which time it has grown in proportion to the surrounding country. It is the seat of justice of the county of Clark—a land office for the disposal of the United States' lands, and a post office are established here, there are also two pilots appointed by law for conducting boats across the falls, residing here; there are about 35 or 40 houses, which are principally of frame and log, except the court house, which is of brick—and contains 175 inhabitants, of whom some are useful mechanicks. In point of natural advantages and beauty, there are few or no situations on the Ohio more eligible for a town. The bank is very high, and surrounded with a rich, level and fertile country. The current and channel of the Ohio for several miles above are on the N. W. shore, and the depth of water being sufficiently great at any season of the year for boats or vessels of any burden, afford at all times an easy landing place, and good harbour for boats descending the Ohio. In descending the Ohio, the first place of landing is at Blooms Eddy;—this eddy is just below the first and greatest obstacle in the rapids—it is a large and convenient landing place for boats at a low stage of the water, and from which, flat boats may pass the balance of the falls with their loading at a low stage of the water. The portage from the landing at Jeffersonville to the eddy, not being more than half the distance to the lower landing on either side of the river, it is thought it will become the principal landing place for boats having to unload above the falls.

In the vicinity of Jeffersonville about half a mile to the north is a medical spring, whose waters is supposed to be strongly impregnated with sulphur and iron. It has been much resorted to for several years, and thought to be beneficial in fevers that prevail in this country. There are several mills in the neighbourhood, only one however of considerable consequence

that is built on a small stream called Mill Run, which empties into the Ohio at the foot of the falls, this is a very considerable merchant mill, and from the resources of the stream, although not more than 2 or 3 miles in length, continues to go during the whole year, except when stopped by back water from the Ohio.—She is the property of Messrs. Cuthbert and Thomas Bullit, built about 100 yards from the river.

CLARKSVILLE

Is a small village situated at the foot of the falls on the N. W. bank opposite to Shippingport—this town was established as early as the year 1783 by the Virginia legislature and attached to the grant made to the officers and soldiers of the Illinois regiment, from which time may be reckoned the first settlement of this country: soon after its establishment it contained a number of inhabitants who were encouraged to settle under promises of donations of lots by the trustees; and notwithstanding the imminent danger and great inconveniency, some of them continued to reside there to the end of the Indian war, and in a great measure contributed to the safety of the inhabitants of Kentucky in the neighbourhood of the falls. There is a large and capacious eddy at this place for the landing of boats. The Knobs or Silver Hills which commence on the Ohio about 10 miles below the falls and take their course through the country in a north eastwardly direction, it is said by those who have taken some pains to examine, afford considerable quantities of ore of some kind or other, supposed to be iron. In the bank of Silver creek (a small stream that falls into the Ohio just below Clarkesville) about two miles from its mouth is found large quantities of copperas, a place well known by the name of Copperas Banks. The copperas taken from this bank is found to be equal (although not so clear in its present state) as any brought to this country.

SHIPPINGPORT

Is situated on the Kentucky side, at the foot of the falls and at the turn of the river to the left, about a mile

and seven-eighths below Bear Grass creek. Boats generally make a landing here after passing the rapids.

Mr. J. A. Tarrascon carries on an extensive rope walk at Shippingport—Mr. James Berthoud keeps a ware house, for the reception and storage of goods—and the town has besides two stores.

(See MAP 10, page 134.)

Salt river, left side,	24¾	730

It is about 150 yards wide, and navigable 60 miles.

Doe run, same side,	12	742
Blue river, right side,	20	762

Just above the mouth of this river are two islands,

Nos 65 and 66. The channel past the first is on the left side; past the second on the right, and keep close to the lower point of it.

Little Blue river,	12	774
No. 67, Flint island & Harden's creek,	10	784

Here the channel is somewhat difficult—You must keep the island on the left, and hug it pretty close, and at its foot you go as if you intended to make the left shore, but after passing the lower point of the island in that direction, you must pull out quick towards the right shore to avoid an ugly sandbar lying to the left below the island.

Sinking creek, channel left shore,	10	794
Clover creek, same side,	10	804
Anderson's ferry, left side,	30	834
Hanging rock, right side,	10	844
Low Lands commence (M. D.)	17	861

The hills which are uniformly to be seen higher up the river either on the one side or the other, now entirely disappear, and there is nothing to be seen on either hand but an extensive level country.

(See MAP 11, page 135.)

Two islands Nos. 68 and 69,	15	876

Channel on the left side.

Yellow Banks, a creek, and island No 70	6	882
Two islands, No 71 and 72,	8	890

Channel on the left side of both.

French island, No. 73, ch. left shore,	8	898
Three Mile island No. 74, same side,	18	916
Green river, left shore, (M. D.)	$9\frac{1}{2}$	$925\frac{1}{2}$

This is a large water of Kentucky, and is navigable with a gentle current for about 150 miles. It rises in Lincoln county, and is 200 yards wide at its mouth.

Green river islands Nos. 75 and 76,	$6\frac{1}{2}$	932

Here are two islands opposite each other, one of which is six miles long, and has six or eight families settled on it ; channel left side of both.

Red Banks,	25	957

At this place which is included in Henderson's grant of 200,000 acres, a town is laid off called

HENDERSON.

Owing to a remarkable bend in the river, though the distance from the mouth of Green river to this place by water is 25 miles, yet by land it is only called eight.

Red bank island No. 77, channel right side,	4	961

Half a mile below the head of this island, keep pretty close to it, to avoid a sand bar putting out from the right shore, and which extends 10 miles down ; at the head of the island is also a sand bar.

Diamond island No. 78, channel right side,	22	983

This island contains several thousand acres of excellent land,

(See MAP 12, page 138.)

Straight island No. 79, ch. right side,	12	995
Slim island, No. 80, ch. same side,	8	1003
A large willow bar, or island, No. 81, channel same side,	3	006
High Bank creek, left shore,	9	1015
Wabash river, and island, No. 82, (M D.)	$7\frac{3}{4}$	$1022\frac{3}{4}$

Channel is on the right side of No. 82.

10
Salt R.
Blue R.
65
66
Little Blue R.
Harding's Cr.
67
Anderson's Cr.

11
Yellowbanks
69
70
71
72
73
74
Green R.
75
76
Henderson
Red Bank
77
78

This is a large navigable river of the Indiana territory, formed by the junction of several branches, one rising within 9 miles of the Miami of lake Erie, another near the head of St. Joseph's river. On the former branch the town of VINCENNES, the capital of the territory, is beautifully situated, in a rich, level and delightful country. Vincennes is a thriving place, has a printing office, several mercantile stores, a post office, and about 100 houses. The principal trade is in furs and peltry. The winters are mild and the climate salubrious. In a direct line it is about 60 miles from the Red banks on the Ohio. Lat. 38° 51′ N.

The Wabash is in several places, interrupted by rapids, especially those between White and Deche rivers, called the Second and Third Grand rapids. About 28 miles above Quitonon, a small French settlement on the north side of this river, a silver mine has been discovered. Salt springs, limestone, freestone, white and blue clay, are often met with in great abundance on this river.

When the waters of the Ohio are high, the banks of the Wabash are overflowed for several miles. It is about 400 yards wide at its mouth, and enters the Ohio at nearly right angles.

Brown's island No. 83, *ch. left side*,	3⅓	1026
Stevenson's island No. 84, *channel right side*,	11	1037
A small island No. 85, *ch. left side*,	3	1040
Saline river right side*,	12	1052

* On or near this river are what is called the "*Saline Salt Works*," belonging to the United States, leased out at present to Messrs. Wilkins and Morrison of Lexington, and others. The works make about 150,000 bushels of salt annually, which is sold at the works for 70 cents per bushel.

Mr. Charles Wilkins states that near these works there are found quantities of the fragments of *antient pottery*, and some pieces sufficiently large to fit the bulge of a hogshead when applied to the side of that vessel, and very thick in proportion. On Goose creek, in Kentucky, there are also a number of *kettles* of

Opposite the mouth of this river is a sand bar, channel left shore.

Battery rock, right shore,	6	1058
Trade water and island No. 86,	1	1059

Channel right side of No 86.

Cave in Rock, and island, No. 87, *(M. D.)*	6½	1065½

Channel past No. 87, is on the right side.

This is a curious cave, it presents itself to view a little above the level of the surface of the water when high, and close to the bank of the river on the right side, a little darkened by the shade of some trees which stand before its mouth. It is about 180 feet deep, and its mouth is of a semicircular form, about 80 feet at its base and 25 feet in height. The cave bears the inscriptions of the names of persons who have visited it at different times and the dates, &c.

Just below the cave is a sand bar on the right side, after passing this bar, is Walker's bar on the left side, channel close to the right shore for a short distance, thence turns across to the upper point of

Hurricane Island No. 88.	4½	1070

This is one of the most difficult island sto pass in the Ohio—You pass it on the left side—But at the head of the island are two ugly sand bars one just above the other. The first one lies

the *antient pottery* found in digging for salt, and in a field near Washington, K great quantities of the fragments of this ware are found, and some uncommonly thick. The writer of this note when in Kentucky, in 18 0, got an entire *pot* of the antient composition, which was found five or six years ago in a salt petre cave in the mountains of Licking river. This pot contains about six quarts, and has evident marks of having been used over the fire; it has no feet, nor can it stand for its roundness at the bottom; bulges in the middle, and laps over at top, and has had four handles like those of a jug of the earthen ware kind. The pot is of a composition of a kind of clay and shells, or flint stones pretty fine, but most probably shells, and remarkably light for its size. The upper part bears a kind of rude ornament of cross barred work, and whether owing to its age or the nature of its composition, it is at present very friable

12
Wabash R.
79
80
81
82
83
84
85
86
87
88
High Bank
Trade Water
Battery Rock
Cave
Saline R.

pretty close to the left shore, and in a middling state of the water you may go between it and the lower one and with less danger of being thrown on the island. The second bar lies in range with the island, and to avoid it in low water, you must keep the right shore pretty well until you are near the island, giving yourself time enough, however, to pull over for the left shore, keeping the foot of the bar on the left, and the head of the island on the right. The right side of this island is filled with rocks, snags and shoals. But in very high water you may pass it on the right side if you keep close to the right shore.

The current draws strongly to the right of the island, therefore use timely exertions to avoid either being drawn into that channel, or thrown on the head of the island.

(See Map 13, *page* 142.*)*

Three Sisters, islands Nos. 89, 90, & 91,	26	1096

Pass the first on the right side, close to the head of the second on the left, and the third on the right.

Miles's ferry, just below first of Three Sisters,		

Here the road crosses from Kentucky to Kaskaskias, St. Louis, &c.

Stewart's island, No. 92, *channel right side,*	10	1106
Cumberland's islands, No. 93, 94, 95, & 96,		

Channel left side of the first, then turn in between them; the lowermost of these islands is opposite the mouth of

Cumberland, or Shawnee river, M. D.	12	1118

This river rises in the Cumberland mountains, on the confines of Virginia. Winding to a S. W. course, it advances into the S. W. territory; thence meandering a N. W. direction, passes by Nashville* into Kentucky, and

* NASHVILLE, formerly the capital of the state of Tennessee, is finely situated on the south side of the Cumberland river, about

unites with the Ohio in a west direction. It is 300 yards wide at its mouth, and is navigable for large barges up to Nashville, and for smaller crafts to the division line between that state and Kentucky. Ships of 300 and 100 tons burden have been built on the Cumberland river, and they can descend in times of floods of that tonnage from 200 miles above Nashville to the Ohio in safety, the river being free of obstructions and having a fine gentle current.

Eddyville, a post town of Kentucky, is situated on the Cumberland river about 45 miles above its mouth.

Col. Matthew Lyon of Eddyville, has lately established a wool and cotton card manufactury. He erected about two years ago a temporary paper mill, put into operation by oxen. He has also established a distillery; and a paper mill now erecting to go by water. He is now turning his attention to hemp raising and has (Nov. 1810) the products of 42 acres on hand, which he calculates will fetch him in the Boston market $350 per ton. He says his presses and machinery for packing hemp reduces 168lbs. to the size of the same weight of Indian corn.—Palmyra a small town is situated on the Cumberland river, in Montgomery county, Tennessee, 50 miles distance above Eddyville.

SMITHLAND,	3	121

190 miles from its mouth, and 150 from Lexington, K. Its situation is on a high cliff of rocks about 200 feet above the level of the river. It contains about 160 houses, has 27 mercantile stores. The staple commodities are cotton and Indian corn It is a lively place of business, and the inhabitants enjoy good health,

Within the last few years the trade and business of Nashville have increased considerably, and many mechanical branches have been established here which manufacture great quantities of iron-mongery, nails, tin and copper wares, &c the town has a printing office, which issues a weekly paper. There are great quantities of cotton raised and collected here from the neighbouring country, and sent to market, some to Pittsburgh in keel boats, some to New Orleans, thence to the eastern seaports.

This town is on the left side of the river, about two miles and a half above the line between the states of Kentucky and Tennessee. It is dwindling away to nothing.

Tennessee or Cherokee river and island, No. 97, channel right side, M. D. 10 | 1131

This is the largest river that empties into the Ohio, is navigable up to the Muscle Shoals, a distance of 250 miles from its mouth, for vessels of considerable burden, from thence boats of 40 tons burden can ascend to the mouth of Holstein, thence up that river to Long Island, from which place to the mouth of Tennessee is reckoned 1000 miles. The passage of this river through the Cumberland mountains is esteemed a great curiosity; ten miles above it is 1200 yards wide, yet at the mountain it is contracted to the breadth of 70 yards. This river rises in the Iron mountains, on the confines of South Carolina and Georgia, passes through Kentucky, and enters the Ohio in a N. W. direction, where it is 500 yards wide—The Muscle Shoals are 20 miles long and 3 broad, and are formed by a great number of small islands, which very much interrupt the passage except in high floods.

Fort Massac, right side, M. D. 11 | 1142

A large sand bar, 8 | 1150

In the middle of the river, channel right side.

Little chain of rocks, 3 | 1153

Channel past these rocks is near the middle of the river.

Wilkinsonville, formerly called Cedar Bluffs, 12 | 1165

Channel three fourths over from the right shore.

Big Chain of Rocks, 6 | 1171

Channel one third over from the left shore, until you are past the two last rocks in the middle of the river, then bear over to the right shore, to avoid a sand bar just below lying to the left.

13
89
90
91
92
93
94
95
96
97
98
Cumberland R.
Smithland
Tennessee R.
Massac
Little Chain
Great Chain
Mouth of the Ohio
Wilkinsonville
Cash R.

Cash island, No. 98 and two bars, 9 1180

This island is on the left shore, the bars are on the right of it, the one runs down pretty close to the island, the other near the right shore, channel about midway between the bars, until you are half way down the island, then bear to the left, to clear a shoal lying to the right. This is the last island in the Ohio, and from thence you have a good navigable water to the Mississippi, which you enter nearly in a S. E. direction.

Mouth of the Ohio river, (M. D.) 8 1188

You now enter the noble stream Mississippi, where you will find the velocity of your boat considerably increased by the additional body of water you swim in, and the prospect of the country much altered from that on the Ohio.

THE MISSISSIPPI RIVER.*

THIS noble and celebrated stream, this Nile of North America, commands the wonder of the old world, while it attracts the admiration of the new.—From its mouth to where it receives the Ohio, is 1000 miles by water, but only 500 by land, passing through the Chickasaw country. From the mouth of the Ohio to that of the Missouri, is 230 miles by water, and 140 by land, from thence to the mouth of the Illinois river is about 25 miles.

The Mississippi is said to take its rise in the White Bear lake, lat. 48° 16′ N. long. 23° 17′ W. But the natives of the country say that it looses its name at the falls of St. Anthony, lat. 45° N. and above them, it assumes the name of Blue river, which is navigable 300 miles, making a distance of about 2580 miles from the mouth of the Mississippi, taking its meanderings.

The following are the principal rivers which empty into the Mississippi on the eastern side, from below the falls of St. Anthony to the mouth of the Missouri, with the distances from river to river, and how far they are navigable, viz. River St. Croix, 90 miles below the falls, said to be navigable 200 miles ; Sotoux, 60 miles further down, navigable 80 miles ; Buffalo river, 15 miles, navigable 100 ; Black, 65 miles, navigable about 100 ; Ouiconsin river, 150 miles, navigable 200 ; Rivière à la Mine, 120 miles, navigable 50 miles ; Rivière à la Roche, 210 miles ; Illinois, 160 miles, navigable about 450, and is 400 yards wide at its mouth.

Between a branch of the Illinois and the Chickago river, which empties into lake Michigan, there is a

* The word *Mississippi*, in the language of the aborigines of the country, is called "*Messachipi*," which signifies the *Father of waters*.

portage of two miles ; from this portage to the lake is a batteau navigation of 16 miles. By this happy connexion of waters, there is a complete communication from New-York to New-Orleans, through that northern and extensive route, having only about 28 miles land carriage, in the distance of nearly 4000 miles, the greatest stretch of inland navigation, perhaps, known in the world.—This route from New-York, is by the Hudson river to Albany, thence by land to Schenecktada 16 miles, thence up the Mohawk river, and through a canal of 4 miles into Wood creek, thence into lake Ontario, and up that lake and Niagara river to Queenstown, 7 miles below the falls of Niagara ; thence 10 miles land carriage round said falls to Chippaway, thence up the river into lake Erie, and through that lake into lake St. Clair, thence into lake Huron, through lake Michigan, and into the Chickago river, mentioned above, thence down the Illinois and Mississippi rivers.—This route comprehends the most extensive channels, and gives a wide scope to trade in general, and may one day be made a very profitable use of to individual citizens, as well as highly advantageous to the trade and commerce of the U. States, especially if they get possession of the northern fur trade now carried on by the British.

The country of the Illinois is perhaps not exceeded in beauty, levelness, richness, and fertility of soil, by any in the United States, nor perhaps in the world.—Its appearance is truly delightful, and some are of opinion that this is the spot that is called by some French writers "The Terrestial Paradise." It yields great quantities of grapes, from which the inhabitants make a very good red wine for their own consumption.—Coal mines, and salt ponds, 100 yards in circumference, are found on the Illinois river ; and on a branch of it, an allum hill has been discovered ; there are also appearances of copper. It yields red and white cedar, pine and mulberry ; indigo, tobacco, hemp and flax are raised to advantage ; the sugar and fruit trees flourish

admirably; and some dying and medicinal plants are found.

The French used to get their mill stones about 250 miles up the Illinois. There are several beautiful lakes near its borders, and one 210 miles from the Mississippi, called the Illinois lake, which is 19 miles and a half in length, and three in breadth, and contains great plenty of fish, particularly the Sturgeon and Picannau. The Illinois has a number of rivers emptying into it, and some of them large, and navigable for 150 miles. The river Michilimackinack which enters it about 190 miles from the Mississippi, is navigable 90 miles, and has at its mouth 30 or 40 islands, which at a distance look like a small village. The banks of the Illinois are high and the water clear, and at the bottom of the river are white marle and sand. It has a number of islands in it, some of which are 10 miles long. The Prairies or extensive meadows abound much on and near the Illinois river; these yield fine large grass and small shrubbery. A Fleche or arrow stone is found on this river, from which the Indians make their gun flints and point their arrows.

Twenty five miles below the Illinois, the Missouri joins the Mississippi on the W. side. It is in fact the principal river, contributing more to the common stream than does the Mississippi, even after its junction with the Illinois. It is remarkably cold, muddy and rapid. Its overflowings are considerable. They happen during the months of June and July; and on account of their commencing later than those of the Mississippi, it is thought that the sources of the Missouri are northward of those of the Mississippi.—Traders go up the Missouri 2000 miles, and for that distance its waters are unbroken with any considerable rapids.*

The Mississippi, below the mouth of the Missouri, is always muddy, and abounds with sand bars, which frequently change their places. It carries 15 feet water to the mouth of the Ohio, to which place it is about three quarters of a mile wide. The current is two pow-

* For a more particular account of the Missouri, See Appendix.

erful to be stemmed by the force of the wind alone, acting upon sails.—Barges, and keel boats, however, may ascend by being rowed or poled: a sail is sometimes of considerable help, and gives ease to the hands.—During the floods of the Mississippi, which are periodical like those of Nile in Egypt, the largest vessels may descend, if care be taken in the steerage, keeping them off the islands which are numerous. These floods begin in April, and the river returns into its banks early in August. Its overflowings or inundations extend further on the western than on the eastern side, covering the lands in some places, 50 miles from its banks. Above the mouth of the Missouri, it resembles the Ohio, like it clear, and gentle in its current, not quite so wide, the period of its floods nearly the same, but not rising to so great a height.—This river yields turtle of a peculiar kind, perch, trout, gar, pike, mullets, herrings, carp, spatula-fish of 50 lb. weight, catfish of 100 lb. weight, buffaloe fish, and sturgeon.—Alligators or crocodiles have been seen as high up as the Arkansas. It also abounds in herons, cranes, ducks, brant, geese, and swans; and its margins are not wanting in musick, from a great variety of the "sweet songsters of the wood."

Fifteen miles below the mouth of the Missouri, St. Louis is handsomely situated on the western bank of the Mississippi, 215 miles by water, and 125 by land above the mouth of the Ohio. It stands on a high piece of ground, and is the most healthy and pleasant situation of any known in that part of country.—St. Louis was first settled by a few French settlers from the east side of the river, about the year 1765. The country falling into the hands of the Spaniards by conquest from Britain, it remained in their possession until that government gave it up to France by the treaty of 1800 and 1801; from whom it passed by right of purchase dated 30th April 1803, into the hands of the government of the United States, and was regularly taken possession of on the 20th Dec. 1804. It is the seat of government for the territory of Louisiana;

the town contains about 200 dwellings, several mercantile stores, a post office, and is now fast increasing in population, buildings, and business generally.—It has also a printing office issuing a weekly gazette. The fur and peltry trade of the Missouri and Mississippi rivers principally centres here. It is in lat. 38° 39′ N. and the climate may be compared with that of Maryland and Virginia between 37° and 39° N. lat.

Cahokia, a small village, is situated 4 or 5 miles below St. Louis, on the east side of the Mississippi and and one mile up a small river. About 45 miles lower down is the village of St. Philips. Fort Chartiers is 4 miles still further down. The village of Kaskaskia, 12 miles below Fort Chartiers is situated 5 miles up a river of the same name which joins the Mississippi on the esat side, about 90 miles above the mouth of the Ohio. The village of St. Genevieve or Missire, is situated on the western bank of the Mississippi, nearly opposite Kaskaskia village; in 1773, it contained 100 houses, and 460 inhabitants; this and St. Louis, were the only towns on the western side of the Mississippi at that period. Four miles below St. Genevieve, on the same side with it, at the mouth of a creek, is a Hamlet, called the Saline; where a vast quantity of salt is made, which can be afforded at about one dollar per bushel at the works.

A few miles westward of St. Genevieve are several lead furnaces, which make a large quantity of lead.—They sell it at the furnaces, from three to four cents a pound.—The lead mines in this part or the Mississippi country are very numerous, and when the settlements can afford them to be worked to their full extent, they must yield a vast revenue to the government of the United States.

The ridge which forms the eastern bank of the Mississippi, above the Missouri continues northerly to the Illinois river, whence from its summit, you have a most delightful prospect of the Mississippi river for 20 miles; and also of the beautiful meanderings of the Illinois for many leagues—Next presents itself to view,

a level and fruitful meadow, of at least 100 miles in circuit on the western side of the Mississippi, watered by several lakes, and shaded by small groves or copses of trees, scattered in different parts of it, and then the eye, with rapture, surveys, as well the high lands bordering upon the river Missouri, as those at a greater distance up the Mississippi.

The fork or point of land formed by the junction of the Ohio with the Mississippi, is about 20 feet higher than the common surface of the river, yet the spring floods overflow it for several weeks. The point is remarkably rich, having the mud of the rivers deposited on it yearly; and it yields in its natural state pea-vines, grass, &c. and in, particular, the aspen-tree, of an unusual height and thickness.

The current of the Mississippi runs at the rate of about 3½ to 4 miles an hour; when very high, something faster. From the mouth of the Ohio to the creek of the Fouche, which is twenty five leagues above New-Orleans, the Mississippi carries from 30 to 60 feet water; below this, to its mouth, from 30 to 40 fathoms, and is from a mile and a quarter, to two miles in breadth. From the warmth and muddiness of the water, it is rendered a disagreeable drink to navigators. By filling some jars with it over night, it becomes cool and clear, and is rendered more palatable. The waters of the Mississippi are said to contain medicinal qualities, having performed cures for most cutaneous diseases, operating on some as a powerful cathartick, and as a purifier of the blood.

The principal rivers which empty into the Mississippi below the mouth of the Ohio, are, Wolf and Yazooz rivers on the left side; rivers St. Francis, White, Arkansas, Red or Riviere Rouge, on the right. These will be more particularly noticed as we descend.

Among the fowls of this river, especially pretty low down, the Pelican are very numerous.*

* The Pelican is a very large bird not unlike the swan in shape or colour; but what renders it particularly singular among the

After you enter the Mississippi you begin to wind considerably to the southward, and sometimes east of that point. The climate becomes mild and warm, and the winter gives but a trifling check to the growth of vegetation. The banks of the river, especially below Natchez, are lined with groves of orange trees, whose delightful fragrance, and the beautiful appearance of their flowers, added to the prospect of getting the fruit plentifully, has a charming effect on the feelings, and seem to form a temporary compensation to the wearied navigator, for many inconveniences he experiences, and the toils and the hazards he may have undergone since his embarkation.

The cotton wood tree also grows in great abundance on the banks of the Mississippi. This tree on examination has been found to be the same with the lombardy, poplar though some doubt its identity.

The waters of this river are kept in their proper channel, below Baton Rouge to New-Orleans, by artificial banks, called the Levee, on which are erected a number of saw mills, which are turned by a sluice being cut through the bank or levee, and the water gushing forth and falling on the wheel, turns it with great velocity. There, being no tail-race, the water expends itself through the flat and swampy country below.

feathered tribe, is its enormous bag or pouch which hangs under its long bill. This is large enough to hold four or five gallons of water; they use it principally however, as a reservoir for the fish they catch, either for their own food, or that which they intend to carry to their young —The pelican is said to have a melancholy countenance, is very torpid, and to a great degree inactive, so much so, that nothing can exceed its indolence but its gluttony, and that hunger is the only inducement it has to rouse from its stupid sleep —It is asserted that they seem to be fond of musick — They are long-lived, and capable of being domesticated. History informs us that the emperor Maximilian had a tame pelican about 80 years. Their flesh is too coarse to be eaten. Their pouches are frequently dried and converted into bags or purses, for the use of the ladies The pouch of this bird is said to have given rise to the fabulous story among the antients, that it fed its young with blood from its breast.

We are indebted for the following interesting description of the river Mississippi and its Delta, with that of the adjacent parts of Louisiana, to Mr. William Dunbar, communicated by him to the American Philosophical Society, from whose work, vol. vi. it is extracted:

"THE multiplicity of the rivers which are tributary to the Mississippi, extending themselves over an immense tract, which comprehends nearly 20 deg. in lat. and 30 in long. must render this river, at all seasons, one of the most considerable on the globe. The annual inundation, being supplied from so great a variety of climates, must naturally be expected to be of long duration; and may generally be estimated at nearly half the year; beginning, (com. annis.) to rise in January, and fall in June; the two extremes being frequently extended by the early autumnal and winter rains in the southern latitudes, and by the protraction of the northern winters, which retards the dissolution of the immense accumulations of snow in those cold regions. At the landing of the Natchez (380 miles from the mouth of the river) the perpendicular ascent of the waters of the Mississippi, from the lowest ebb to the highest inundation, may be estimated at 50 feet. At Baton Rouge (200 miles distant) it was found to be 30 feet; at New-Orleans (80 miles above the mouth) it is about 12 feet; and at the mouth of the river scarcely any perceptible change is observed, excepting by a stronger current, charged with earthy matter, rolling into the ocean during the season of the inundation; at which time all the lakes and communications with the sea are replenished with the waters of the inundation, and the ocean itself is often repelled to such a degree that fresh water has been drawn up out of sight of land. This great difference in the perpendicular rise of the waters of the inundation is to be accounted for from the prodigous number of natural canals issuing from the Mississippi, and those immense sheets of water, often unbounded by a single horizon, flowing over the banks, and never

to return, and inundating vast tracts of country, which owe their existence to the creative power of this grand river, and which finally discharge themselves into the Mexican Gulph by an infinite number of mouths, many of which are, in apparent magnitude, equal to the Mississippi itself; the space embraced by the Delta of this river, on the sea coast, being, from information, not less than three degrees of longitude.

" The waters of the Mississippi are not, at any time, perfectly transparent: during the absence of the inundation they are not much troubled, presenting a slight milky appearance, which is attributed to the Missouri; but during the time of the inundation, all the rivers which discharge their superabundant waters into the Mississippi are more or less charged with terrene matter, and during the decline of the inundation the turbidness is sometimes so great that a glass filled with its water appears to deposit, in a few minutes, a sediment equal to one-eighth of its bulk. This extreme impurity is not to be attributed entirely to the immediate effect of the Missouri, but principally to the falling in of the mud banks, either newly formed beneath the influence of the current of the river, or undermined by its rapidity, perpetually changing its bed, by enlarging the concavity of its bends, and projecting its points or head-lands. This operation has a natural tendency to lengthen the circuitous course of the river; but the effect is amply compensated by its own progress; for the enlargement of the bends frequently brings them so near each other, that the weight of the waters bursts at once through the solid soil, forming, in a few days, a new bed, capable of conveying the whole waters of this mighty river, and shortening thereby its course many leagues. The disruption which took place at Point Coupée cut off ten leagues, and within this territory the cut-off at the Homochito has thrown to the east of the Mississippi an island of seven leagues in circuit; and at the Yazooz a similar effect has been produced on the west side, by the formation of an island of five leagues in circumference. Those islands are now both

converted into peninsulas, by the formation of new land across one of the mouths of the old channel, while the other is partially kept open by the discharge of the (comparatively) small rivers of the Yazooz and Homochito; the former of those, nevertheless, is not inferiour in magnitude to that great commercial river the Thames. The consequence of those disruptions is the formation of lakes, which, in process of time, may be far removed from the actual channel of the river, and, in effect, are now found to be scattered in all situations over the immense valley of the Mississippi.

"When those lakes are first approached, they present so perfect a resemblance of the Mississippi, with regard to breadth, the appearance of the banks, and the natural serpentine form of its course, that many persons have been deceived thereby, and recognized their error only by the discovery of the stagnant state of the water, the appearance on its borders of the Nymphæa Nelumbo, and other aquatick plants. No person, therefore, doubts that those lakes have all, in their turn, served to convey the waters of this father of rivers, and now, during the season of the inundation, still flow with a full current, contributing their aid to the evacuation of the waters of a thousand rivers which precipitate themselves into the valley of the Mississippi. When we take a survey of this valley, upwards of thirty miles wide opposite to the Natchez, diverging very obtusely as we approach the sea-coast, where it is, perhaps, not less than three degrees in longitude, and that in no part of it do we discover any other soil than such as is now daily deposited by the waters of the Mississippi, it is impossible not to believe that this valley has, in the beginning, been a branch or inlet of the ocean, which received into its bosom this great river, similar to the river de la Plata, the gulf of St. Laurence, Delaware bay, and many others not remarkable for the alluvial properties of their rivers. When, on the other hand, we contemplate the effects of the creative power of the Mississippi, which has filled up

this prodigious space with soil, more or less solid, and which must, at Natchez, exceed 100 feet perpendicular above the level of the sea, sloping gradually, like an immense glacis, to the coast of the bay of Mexico, where, nevertheless, it does not terminate, but shelving off, by continual accumulation, frequently embarrasses vessels out of sight of land, along the coast, to the west of the Mississippi: I say, when we survey this immense work, performed by the hand of nature, we cannot accord with the opinions of certain visionary philosophers, who have been pleased to amuse themselves with the pretended infantile state of our continent, compared to their transatlantick world; but, on the contrary, we must grant to it an incalculable antiquity. When the inundation is at its height, the whole valley is replenished with water, every where in motion, making its progress towards the ocean; so that, at that season, the river may be said to be thirty miles or more in breadth at Natchez. The waters which pass over the west bank of the main channel never return. On the east, a chain of high land, which, at many points, is washed by the river, meandering along its valley, compels its waters to rejoin the primitive stream; but from Baton Rouge, the high land, which has hitherto held a southerly course, diverges suddenly to S. E. and is no more visited by the grand channel of the Mississippi. All the waters which escape to the eastward, between Baton Rouge and Manshac, (fifteen miles) are collected by the Iberville, which, passing through a breach in the high land of about sixty yards wide, delivers its contents to the river Amit, which empties itself into lake Maurepas, communicating with the ocean by the intervention of the more considerable lake Ponchartrain. The high land is continued in a very narrow tongue or promontory, in a south-easterly direction, along the island of New Orleans which is disruptured in many places, thereby venting the waters of the inundation into the lakes, which otherwise would be collected into an oblong bason, formed by the high land on the one hand, and the

bank of the river on the other. One half of the island of New Orleans would have thereby become so completely inundated as to be uninhabitable.

"The perpendicular height of the high lands above the level of the inundation is from 200 to 300 feet at Natchez; at Baton Rouge it does not exceed 25; and on the island of New Orleans it declines so rapidly as frequently to be lost under the accumulations of soil deposited by the waters of the inundation. In the sides of a canal from New Orleans to the river St. John's, communicating with lake Ponchartrain, I discovered the continuation of the high land cut through to the breadth of little more than 20 feet.

"To a stranger, the first view of the Mississippi conveys not that idea of grandeur which he may have pictured to himself: his first judgement will rest upon the appearance of its breadth, in which respect it is inferiour to many rivers of much less note. Its principal channel is rarely a mile in width any where below the Ohio, unless where its stream is divided by islands or shallows: it is not unfrequently less than half a mile. The magnitude of this river is not to be computed by its width, but by its depth; in which it is, perhaps, equal to any on the globe; but is so contracted at the place of its entrance into the ocean, as to be there less in width than it is found to be at a thousand miles from its mouth: the cause of this peculiarity is, perhaps, not difficult to develope. The natural effect of rivers is to increase continually the depth and breadth of their beds, by the perpetual abrasion of their waters. Such must be the consequence with regard to all rivers which do not supply by alluvion a sufficient quantity of matter to counteract this effect. Certain rivers, which, in the upper part of their course, pass through fertile regions, whose rich and tender soil is easily broken down and carried away by the impetuosity of the current, not only supply this deficiency, but discharge such inconceivable quantities of earthy matter as to fill up, in a great measure, those spacious bays and channels, scooped out by the hand of nature, in order to facilitate the mingling of

their waters with those of the ocean. In such circumstances the breadth of the river will always be in proportion to the mean quantity of water discharged during the time it flows within its banks; for it is to be remarked, that during the time of the inundation the common channel of the river is in some measure lost in the immensity of waters which flow over its banks in all directions. The bottom and sides of the channel, during this time, suffer no abrasion, but, on the contrary, from the diminution of the velocity of the inferior currents, gain rapidly upon the breadth of the river. The moment the current of the river is confined within its proper banks, it begins to exert its dominion over its own channel, and fashions its bed by the momentum of its waters, attacking sometimes one side, sometimes the other, according as the main filament of the stream is deflected from shore to shore; by which means large portions of the newly-created soil are preserved, while in other situations the more compact earth is undermined and borne into the ocean, and thus an equilibrum is restored between the channel and its included waters. Hence it comes to pass that rivers which run through alluvial countries are much narrower, in proportion to the quantity of their waters, than those whose course are over rocks, gravel or sand; but, on the other hand, their depths are great, and they are consequently better fitted for the purpose of navigation. The Mississippi is supposed to be navigable (pursuing the western branch, or Missouri,) 3000 miles at least from the ocean. Those who have studied the theory of rivers inform us, that the stability of the bed of a river depends upon a due equilibrium between the velocity of the current and the tenacity of those matters which compose its bottom and sides. The velocity of rivers is greatest at the surface, gradually diminishing downwards. Hence, when the bottom is composed of matter of the most yielding nature, the channel will continue to deepen until the velocity at bottom is almost nothing, and the depth of the water will be regulated by those circumsances. The

bottom of the bed of the Mississippi, within the alluvial country, being composed of the finest sand and lightest earth extremely comminuted, it is not surprising that its depth should be comparatively great.—Its soundings have, it is believed, never been taken with minute attention; but from New-Orleans to the mouth of the river, its depth is said to be from fifty to seventy fathoms, under the thread of the current, which follows the concave shore; diminishing gradually towards the elbows, where there are frequently considerable shallows. The sudden effect of the diminution of the velocity of water is no where more remarkable than at the mouth of this river; for the rolling torrent no sooner arrives at the ocean, than, finding its bed indefinitely enlarged, it spreads on all hands; the thread of the current divirges into an infinite number of filaments, like radii from a centre; the velocity of the mass of water rapidly diminishes until no longer able to propel the matter hitherto suspended and swept along by the swiftness of the stream, it is deposited in form of a crescent, opposing to the mouth of the river a bar, with from twelve to twenty feet water. The current being less, immediately to the right and left than in front of the mouth of the river, the deposition and accumulation of matter will consequently proceed more rapidly on either side; and the velocity of the current being increased by the contraction of the channel, the bar will be protruded further into the ocean. Hence it appears why the mouths of all alluvial rivers terminate in a promontory, projecting more or less into the ocean. This last mentioned operation of nature points out the method of improving the navigation of the entrance of the Mississippi, which may be effected at no very considerable expense, by carrying out a pier on each side of the principal branch, composed of piles, so far as may be found sufficient to procure the desired depth. The bar will thereby be thrown into deeper water, and, in process of time, will accumulate and ascend to its former height, which will demand a new prolongation of the piers. Every small

rivulet passing through Lower Louisiana is a miniature of the Mississippi: what may be performed, upon a small scale, in respect to the latter, will certainly succeed (by well directed efforts) on the former. The river St. John's, sixty to eighty feet wide, entering lake Ponchartrain to the north of New-Orleans, was found frequently so choaked up and impeded by a bar across its mouth, that canoes could sometimes with difficulty enter; sloops and batteaux being obliged, at such times, to remain in the lake, exposed to danger. The government directed two very simple piers, each composed of a double row of round rough piles, to be carried from the shore across the bar; and although the piers were pervious to the water, yet so much velocity was acquired, that the bar was very speedily swept off, and the river has always since remained navigable for small sloops and schooners, which proceed up to the city by the river and canal of Carondelet.

"The depth of the river diminishes considerably as we advance upwards; probably owing to the increased tenacity of the matter forming its bed.—At Natchez, when the waters are low, it is about twelve fathoms; and there are situations below the Ohio, where the ordinary boats have been embarrassed to find a passage both upwards and downwards; a moderate fresh, nevertheless, renders the Mississippi navigable up to the Falls of St. Anthony, about 2000 miles from its mouth. The breadth of the river appears to be upon the increase upwards, in proportion as we get above the alluvial country, as high as the Missouri, notwithstanding the loss of a number of principal rivers which flow in below. In latitude 42 deg. it is said to be half a mile in breadth, which probably equals its mean breadth from Yazooz to its mouth.

"The margin of the river is the highest land to be found in the valley of the Mississippi. As the river overflows its banks, the waters immediately begin to deposit their grossest particles, which are chiefly sand and black marl; and in their progress backwards, this

deposition is continued until, at length, a matter is deposited, so highly levigated that, upon the retiring of the waters, it assumes a compactness and solidity resembling pitch. When the river, by disruption, alters its course, and new accumulations of slime, sand and marl are laid upon this very compact earth, a false belief might be induced that this solid soil is not the offspring of the river, but the original parent earth coeval with the Mississippi itself, upon which this great river had afterwards deposited the rich spoils of the northern regions, borne down by its mighty tide. This compact soil I have found at the depth of from ten to thirty feet; and in other situations no appearance is to be seen of any other than the common soil formed of the mud of the river. The soil near the river is sandy, particularly that which has been lately formed. From a quarter to half a mile from the margin of the river the sand is less apparent, and loses its name of "terre sablonneuse," acquiring that of "terre grasse," being the richest black marl, with a moderate admixture of sand. At greater distances, and frequently at some depth under the last mentioned soils, is found the above mentioned compact earth, called glaise (potter's earth): it is no doubt eminently adapted to the use of the potter, though hitherto not much applied to the manufacture of earthen ware. Upon all lands long subject to culture, and defended from the inundation, although near to the margin, the appearance of sand is almost lost; but it is evident, from the friability of the soil, and the facility with which it is cultivated, that a large portion still remains intimately mixed with it; whereas the terre grasse (unmixed or pure marl) yields with difficulty to the plough: it exhibits proofs of the richest marl, a slight shower causing it to crumble into powder after being turned up: yet, as our climate is exposed to sudden and violent falls of rain, with hot sun-shine, it frequently becomes so firm and unyielding, after the crop has been planted, that no mode of cultivation can be conveniently applied, but barely scratching the surface with the hoe; yet this

became, with the French indigo planters, a favourite soil. Although less productive, it is more easily kept clear of weeds, the compacted soil refusing a passage to their tender fibrous roots, while the vigorous tap-root of the indigo plant conquers the obstinacy of the subjacent stratum. From the river bank a natural glacis is formed, whose declivity at New-Orleans may be at the rate of six or eight inches in 100 feet, to the distance of 600 or 700 toises, diminishing; after which the descent becomes almost imperceptible, and is gradually lost in swamps, marshes and lakes, which finally communicate with the sea."

The following list of the indigenous plants, shrubbery and herbaceous, to be met with on the Mississippi, along the boundary, and in the Floridas, may not be uninteresting to many of our readers. To the popular names, those used by the botanists are added, in the manner practised by the ingenious and learned author of the "*Notes on Virginia.*" The botanical name constantly follows the popular one, and is included in a parenthesis.*

"At the mouth of the Ohio, and down the Mississippi swamp, one of the prevailing species of timber is cotton-wood, (populus deltoides of Marshall,) it bears a very striking resemblance to the lombardy poplar, is equally quick in growth, open, soft, and porous. Black-willow, (salix nigra,) black-ash, (fraxinus nigra,) sugar maple, (acer saccharinum,) but not in great abundance, and becomes more scarce as you descend the river. I do not recollect seeing but one tree of it south of the boundary. Water maple, (acer negundo,) pecan, (juglans illinoinensis,) this is met with as high as the Wabash, where it is not scarce, but becomes more abundant from thence down to the gulf of Mexico. Papaw, (annona triloba,) I have eat of the fruit in great perfection as early as the 17th of July, in the Mississippi territory. Button wood, or sycamore, (platanus occidentalis,) hickory, (juglans hickory of

* Ellicott's Journal, p. 284.

three species.) The cypress, (cupressus disticha,) begins to make its appearance about the Arkansas, and becomes very abundant a little further south, and appears to be inexhaustible before you reach the 31st degree of north latitude. It occupies many parts of the swamp almost to the exclusion of any other timber. The cypress is a very useful wood, and generally used in that country for covering, flooring, and finishing buildings. It grows in swamps, marshes, and ponds, but not on high dry land. The stem, or body of the tree, generally rises from the apex of a large conical base, above which the workmen have frequently to erect scaffolds before they fall the tree. From the roots of the tree a number of conical excrescences grow up, which are called cypress knees, some of them are eight or ten feet high, and being hollow are used for bee-hives, and other purposes. The long moss, (tillandsia usneoides,) makes its appearance on the Mississippi nearly in the same latitude with the cypress, and almost covers some of the trees to which it is appended before you reach the Walnut-hills. This is a very useful article, and answers almost as well for beds, and mattresses, as craped horse hair: it is nearly as elastick, and almost as incorruptible. Although this moss, is not like the misletoe immediately connected with the trees on which it hangs, it will not live long on a dead tree. Sweet bay, (laurus borbonia,) magnolia grandiflora: this most splendid, and beautiful tree, I do not recollect seeing above the Walnut-hills; but have no doubt of its growing much further north. It is common through all the rich lands of Natchez, and east to the Atlantick. The foregoing appear to be confined either to very wet, or very rich land, and will be met with in all such places along the boundary, and through the Floridas, with the exception of the peccan, sugar maple, and one or two others. The katalpa, (bignonia catalpa,) is not uncommon; but appeared the most abundant on the banks of the Coenecuh. The nyssa aquatica, is common on the Chattahocha below the boundary. Exclusive of those plants,

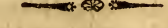
which are generally confined to low or very rich grounds, the following will be met with in various parts of the country. Sassafras, (laurus sassafras,) which grows to a large size about the Natchez. Sweet gum, (liquid-amber,) common swamp gum, (nyssa integrifolia,) holly, (ilex opaca,) in great abundance in some parts of the Mississippi territory, and frequently becomes a large tree. Parsimon, (dyospyros virginiana,) very common. Locust, (robinia pseud-acacia,) honey locust, (gleditsia triacanthos,) black walnut, (juglans nigra,) elm, (ulmus americana,) dog wood, (cornus florida,) red bud, (cercis canadensis,) mulberry, (morus rubra,) wild plum, (prunus chickasaw,) tulip tree, (liriodendron tulipifera,) this is improperly called *poplar* in the middle states. White oak, (quercus alba,) black oak, (quercus nigra,) swamp oak, (quercus aquatica,) chesnut oak, (quercus prunus,) with several other species, or varieties. Live oak, (quercus virens,) this very useful timber is much confined to the coast, and a short distance from it. I do not recollect seeing it in any considerable quantity in West Florida, as far north as the boundary. Red cedar, (juniperus virginiana,) this is likewise much confined to the coast, and in some places very abundant. Pine, (pinus,) broom pine, (pinus palustris,) with several other species or varieties; the quantity inexhaustible. Buck eye, (aesculus pavia,) this is sometimes confounded with the buck eye, (aesculus flava,) of the Ohio; they are not the same. Wild cherry, (prunus virginiana,) great palmetto, or cabbage tree, (corypha or palmitto of Walter,) cassina yapon, (ilex vomitoria,) the black-drink used by the Creeks, and some other Indian nations at their councils, and publick meetings, is made by an infusion of the leaves of this shrub. Myrica inodora, (of Bartram,) from the berries of this shrub, the green wax, used in making candles is collected: these two last are confined to the coast. Beech, (fagus ferruginea,) chesnut, (fagus americana,) chincopin, (fagus pumila,) some of them are sufficiently large in the Mississippi territory to be split into rails. Spice-

wood, (laurus benzoin,) Bermudian mulberry, (callicarpa americana,) cane, (arundo gigantea of Walter,) extends through all parts of the Mississippi swamp, and occupies equally the high, as well as low land, from the Walnut-hills down the river to Point Coupee, and easterly from fifteen to twenty miles or more. The whole of that high, rich, hilly and broken tract of country, except where the farms are opened, may be considered one solid cane-brake, and is almost impenetrable; but will probably be destroyed in a few years by the cattle, hogs, and fires. Its general height is from twenty to thirty-six feet, though I have met with it on the tops of several hills forty-two feet high. The small cane, or reed, (arundo tecta of Walter,) begins to make its appearance on the boundary about twenty miles east of the Mississippi river, and with the arundo gigantea, or large cane, will be found on all the creeks and river bottoms, through to the Atlantick. The China root, (smilax China,) and passion flower, (passiflora incarnata,) are abundant in the rich grounds. The sensitive briar, (mimosa instia,) this beautiful and singular plant, is common to the poor, sandy land. Several species of that beautiful plant, the saracinia, are frequently met with in the margins of swamps, and low grounds: and three or four handsome species of the water dock, (nymphea,) poke, (phytolacca decandra,) sumack, (rhus,) several species. Along the water courses, and in the swamps where the land is good, several species of well tasted grapes are found in great plenty. Many of the trees in the low grounds are loaded with a variety of vines, the most conspicuous of which are the creeper, or trumpet flower, (bignonia radicans,) and common poison vine, (rhus radicans,*) misletoe,

* Mr. Ellicott while ascertaining the boundary line between his catholick majesty and the United States, observes in his "JOURNAL," that while ascending the Chattahouche, (a river emptying into the Gulph of Mexico, and running through East Florida,) he was blistered by the rhus radicans (poison vine) from head to feet. This aptitude, says he, to be disordered by this poisonous vegetable I have been subject to from my infancy, and have generally been confined in consequence of it, at least one

(viscum,) is in great abundance, and will be found attached to almost all kinds of trees. I have frequently observed it on peach and plum trees. In the middle states it is generally found on the common swamp gum, (nyssa integrifolia.)"

For a further botanical description of the plants, shrubs and trees of the Mississippi and of the country east of that river, we must refer our readers to the interesting travels of William Bartram, whose account of that country and its natural productions is highly worthy of the perusal of every inquiring mind, and it may be a matter of no little surprise that "*Bartram's Travels*" are so seldom to be met with in the Book-cases of gentlemen of taste and reading. We have under our eye a copy of the first edition, printed in 1776 in Philadelphia, by James and Johnson, and believe it to be the only edition ever published, which circumstance we esteem as a matter of unmerited neglect by the reading part of the community.



INSTRUCTIONS AND PRECAUTIONS, NECESSARY TO BE ATTENDED TO IN NAVIGATING THE MISSISSIPPI RIVER.

THE hints we have already given respecting the precautions necessary to be observed in descending the Ohio, will in some particulars apply to the Mississippi. —But there being a considerable difference in the nature of these rivers, a difference of management, and a greater degree of circumspection, labour, and watchfulness, will be found absolutely necessary.

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week every summer since. The evaporation from the dew from this plant in the morning, falling upon me, is sufficient to produce the effect. The irritation and heat of this complaint was frequently so excessive, that I had to plunge into the river many times in the day, and lay whole hours in it during the night, which was the only relief I could find; medical aid had at all times proved ineffectual to relieve me.

The boats intended for the Mississippi must be much stronger in their timbers, and more firmly built than those for the Ohio only.—They ought also to be caulked better, and much higher all round, better roofed, and have a longer and stronger cable; and it would be well, if proprietors can afford it, instead of taking along side a canoe, to procure a kind of long boat, that would carry, in case of a ship-wreck, a leak, or other accident, 20 or 30 barrels of flour or whiskey. This provision might sometimes perhaps be the means of saving a part of a cargo, and the boat would sell at Orleans, if well and neatly made, for as much as it might cost at Pittsburgh, or any other place where they could be purchased.

The following observations point out the principal impediments, and the most imminent dangers attending the navigation of the Mississippi:

These are 1st:—The instability of the banks.

2. Currents called bayous, rushing out of the river in a state of its high waters; and,

3. Planters,¶ sawyers, and wooden islands.

We shall endeavour to instruct the unexperienced navigator how to avoid them. The instability of the banks proceed from their being composed of a loose sandy soil, and the impetuosity of the current against their prominent parts (points,) which, by undermining them unceasingly, causes them to tumble into the river taking with them every thing that may be above. And if, when the event happens boats should

¶ PLANTERS are large bodies of trees firmly fixed by their roots in the bottom of the river, in a perpendicular manner, and appearing no more than about a foot above the surface of the water in its middling state. So firmly are they rooted, that the largest boat running against them, will not move them, but they frequently injure the boat.

SAWYERS, are likewise bodies of trees fixed less perpendicularly in the river, and rather of a less size yielding to the pressure of the current, disappearing and appearing by turns above water, similar to the motion of a saw-mill saw, from which they have taken their name. They sometimes point up stream as well as down.

WOODEN ISLANDS, are places where by some cause or other, large quantities of drift wood, has through time, been arrested and matted together in different parts of the river,

be moored there, they must necessarily be buried in the common ruin, which unfortunately has sometimes been the case. For which reason, navigators have made it an invariable rule never to land at or near a point, but always in the sinuosity or cove below it, which is generally lined with small willows of the weeping kind, whence some call them although improperly, willow points, and which being generally clear of logs and planters, the landing is easily effected, by running directly into them, the resistance of the willows destroying a part of the boat's velocity, and the rest is overcome without much exertion by holding fast to the limbs which surround you. In those places the river generally deposits the surplus of soil, with which it is charged from the continual cavings of the points, and so forms new land on one side, by destroying some on the other.

The banks of this river from where it receives the Missouri to its mouth, being with a few exceptions below high water mark, an immense country is inundated, when the river is in its highest state, by which those extensive swamps are formed and supplied, which prove the nurseries of myriads of musquitoes and other insects (to the no small inconvenience of the traveller) and the never failing source of grievous diseases to the inhabitants. There are also streams, which at all times sally forth from the main river with astonishing rapidity, and whose vortex extends some distance into the stream. Boats once sucked into such bayous are next to lost, it being almost impossible to force so unwieldy a machine as a flat bottomed boat against so powerful a current. It will therefore be safest for boats never to keep too close to shore, but to keep some distance out in the river. To avoid planters and sawyers requires nothing more but attention, for they always occasion a small breaker wherever they are, and if your boat seems to be hurried towards them, pull from them quick, else if you are dilatory you must abide by the consequence.

WOODEN-ISLANDS, are more dangerous than real ones, the former being an obstacle lately thrown in the way of the current, and the bed of the river not having had sufficient time to form that bar or gradual ascent from the bottom of the river to the island, which divides the current at some distance from the point of the island above water, the current will hurry you against them, unless you use timely exertion. From all this it must be evident how imprudent it is attempting to go after night, even when assisted by a clear moon; but after you are once arrived at Natchez, you may safely proceed day and night, the river from that place to its mouth being clear, and opposing nothing to your progress but a few eddies into which you may occasionally be drawn and detained for a short time.

The islands of the Mississippi are numerous and many of them large, and from their being generally situated in the bends of the river, they become more difficult and dangerous to pass. We have been sedulous, however, in giving such descriptions of them, and pointing out the method to avoid them, as we hope will be found very useful, and render the danger much less, thereby affording a considerable security to the cargo, and ease to the mind of the navigator.

The principal islands are numbered, together with such descriptions of their size and situation, as cannot easily be mistaken; and by recurring to the MAPS, you will find them represented by white spots, with their numbers opposite them. The sand bars are less white and cross-barred; and the channel is pointed out by a double white line, which in some few instances may be found contrary to the direction given in print, arising from the difference of opinion among navigators themselves:—Where this is the case, we advise that the printed directions should be followed in preference to the line on the map.

The distances are taken from the head of one island or sand bar, to the head of those next below them, including the supposed length of each, which measure-

ment, (being principally by the eye and running of the boat) is carried out to the column of totals, to make out the general distance as correct as possible.

Directions for navigating the Mississippi from the mouth of the Illinois river to that of the Ohio, together with a short account of the towns on its banks for that distance.

THE ILLINOIS is a fine navigable river, interlocking by a portage of four miles with the Chicagow, a short river which empties into lake Michigan, through which channel the great route of the fur and peltry trade is carried on between St. Louis and Michilimackinack, and the other northern lakes. The Illinois winds a distance of about 400 miles through a delightful and fertile country, receiving as tributaries the following rivers on its eastern side. Theakik river, whose head waters reach within a few miles of St. Joseph's river, and enters the Illinois about 60 miles from lake Michigan; five miles above its mouth on the Illinois is lake Dupage. The Vermillion river enters about 75 miles below the Theakik; the Rainy river about 25 miles lower down; the Crow Meadow river 20 miles; the Michilimackinak river, between which and Crow Meadow river is a broad opening in the Illinois lake, about 10 miles in length, at whose lower end on the west side stands a square fort called "*Old Piorias Fort*," about half way between the mouth of the Illinois and lake Michigan. Within 40 miles of the mouth of the Illinois a short river enters of considerable size, and which heads in a long lake. There runs from the mouth of the Illinois up to the Michilimackinak river a spur of hills ten or fifteen miles back, between which and the Illinois are large meadows.

The rivers that empty in on the western side of the Illinois are the Fox, March, Semi Quian, Demi Quian rivers, and Demi Quian lake, Sagarron and Mine rivers, and several smaller streams.

From the mouth of the Illinois to Wood river a little below the Missouri, there is a beautiful settlement rapidly increasing, principally of Americans, and a few French. This settlement extends through an extensive rich prairie, affording strong vegetation, and is finely watered.—The herds of cattle through this country are numerous, and their lively and sleek appearance afford an evidence of the rich productions of the soil in which they pasture.

Island No. 1, *opposite the mouth of the Illinois, channel right side.*

Island No. 2,

Lies nearest the left shore, channel to the right. On the right shore opposite the head of this island is a sand bar.

Island No. 3,

Right side, channel to the left. From the head of this island Portage Desieu strikes the Missouri in nearly a strait line, about six miles distant.

Island No. 4, *channel to the right,*

Island No. 5, *right shore ch. to the left.*

Island No. 6, *immediately above the mouth of the Missouri,*

Channel on either side.

Mouth of the Missouri, 18 18

St. CHARLES, a handsome village, is situated about twenty miles up the Missouri on the left side. It contained in 1807 about 500 inhabitants, chiefly French; many Americans have settled here since the cession of Louisiana to the United States. It is 18 miles from St. Louis by land, over an excellent road and through a rich country, principally prairie land. Three miles up this river is Belfont, the principal station for the troops of the United States in this territory.

Du Bois, or Wood river.

Islands Nos. 7 *and* 8, *ch. between them.* 1 19

Sancere's house, right side, 3 22

Opposite is a very large sand bar, channel good on either side. A small creek enters at the lower point of the bar, right side.

Island No. 9, *left side*, *ch. right side.*

Mess river, *right side*, 3 25

Le Baum has a handsome situation on the right side of the river. Just above a small creek enters.

ST. LOUIS, 8 33

Capital of Louisiana, is situated on the west side of the Mississippi, in lat. 38° 39′ N. long. 12° 51′ west from the city of Washington. It extends along the river about two miles, in 3 parallel streets, each rising above the other, which has a very handsome appearance. The bank of the river is high and filled with limestone, and most of the houses, are built of this material, some of them in a grand stile and surrounded with galleries. Almost every house has an extensive garden or park, around which high stone walls are built. The number of inhabitants is about fifteen hundred. A mile from the town Mr. A. Choteau has erected a mill and distillery; he has an excellent situation for improvement.

The country around and west of St. Louis for 15 miles is one extended prairie, in which vast herds of cattle graze and fatten in the luxuriance of the soil. Sixty miles southwest, the celebrated lead mines of Louisiana are situated. In the middle of the river opposite the town, is a large sand bar island, No. 10, channel on the town side.

On the opposite side of the river is Campbell's ferry, from hence the main road passing through the Illinois country, strikes Cahokia about 7 miles from St. Louis. This village is handsomely situated at the edge of a prairie. The inhabitants principally French.

The country on both sides of the river is exceedingly fertile, producing corn, wheat, rye, flax and hemp; sweet and Irish potatoes, mel-

ons and fruit, as apples, peaches, pears, cherries, &c.

A growing settlement called Turkey Hill Settlement, the settlers principally Americans, extends from Wood river to opposite St. Louis.

Island No. 11, *channel on either side.*

There is a large and long sand bar at the upper end of this island; in low water it is about a mile in length.

VITEPUSH. 8 41

This is a handsome French village on the right side; it contains about 50 houses. Opposite are two large sand bars; there is a good channel between them, but the best channel is on the right side. Bigolua, a large creek, empties in on the left side nearly opposite the town.

About a mile distant from the river left side is lake Marrodizua, five miles in length, and from the lower end of which a small creek falls into the river. It is said to be well stored with fish, and is the resort of a variety of wild fowl. Some beautiful farms are situated in its neighbourhood. Two miles below this is lake Bond, which is about two miles in length and two and an half from the river.

Island No. 12, *best channel right side.*

Island No. 13.

A bar at the upper and lower point; best channel right side.

Philip Fine's, an old settler, 8 49

Merrimack river, right side, 3 52

This is a large stream of Louisiana territory, and in high water is navigable a considerable distance. There are a number of valuable salt springs on its banks; and in its neighbourhood great abundance of lead is found. The Indians take quantities of it to St. Louis in flat pieces.

Islands Nos. 14 *and* 15, *channel between them.*

To the left of No. 15 is a large sand bar; opposite a small creek empties in the left side. Just below is a small bar, keep to the right.

Little Plateen, rock and creek, right side, 6 58

Island No. 16, *near the left shore,*

Opposite is a large sand bar, which joins the head of No. 18. A small creek from lake Bond enters opposite No. 16.

Island No. 17, *channel right side,*

Opposite the head of this island, Swashing creek enters on the right side.

Island No. 18, *left side.*

A large sand bar to the right of the lower point of this island, best channel on the right of the bar.

HERCULANEUM. 8 66

A new town on the right side of the river; the proprietors are col. Samuel Hammond and major Moses Austin; it contains about 20 houses. Mr. Matlock has established a patent shot factury here; for which the situation is well fitted, the town standing high, on a rock. He has a fall for the shot of 200 feet perpendicular; and has been at but a trifling expense in preparing the place for his factury. In a due west direction about 50 miles from the town are situated at a small village, called Mine a Burton, the lead mines, which furnish vast quantities of this article.

Opposite Herculaneum is Legle creek, at the mouth of which is a large store and tavern; from this place the road leads to Kaskaskia.

Islands Nos. 19 *and* 20, *best channel to the right,*

Large Plateen, rock and creek, 2 68

On the right side of the river. The bank of the river from Little Plateen to this place, has a majestick appearance. It is a continued rock of limestone, rising from the base, declining step by step to the height of 2 or 300 feet; the steps or ledges not more than 6 in-

ches deep, and appear as if cut by the chissel; and here and there springing forth are small cedars.

The soil on the top though somewhat broken is very rich, affording every variety of grain and herbage.

Island No. 21, *left shore.*

At the head of this island on the right is a sand bar; channel between the bar and island. The island is in the form of a half circle.

Fort Chartres. 10 78

Stands on the left bank of the river. It was formerly a place of considerable strength; built of stone by the French, and sufficiently large to accommodate 1000 men. It is now falling to decay.

Island No. 22, *on the right, channel to the left.*

Island No. 23, *good channel on either side.*

Opposite this island Establishment creek enters on the right. Prairie du Rochers is on the left shore.

Island No. 24, *near the left shore, channel right side.*

Gabarre creek, right shore. 12 90

About three miles above the mouth of this creek lies St. Genevieve a town of about 200 houses, containing 12 or 1400 inhabitants. The first settlers were French, but since the cession of Louisiana to the U. S. many Americans have made this the place of their residence. There are about 20 stores; and it is the chief mart for the lead brought from Mine a Burton and other lead mines in the territory. It has a handsome church in which the rev. mr. Maxwell officiates; he is a hospitable man, and the stranger in him will find a friend and an adviser. Along the bank of the river extending about five miles lies the "Common Field," belonging to the inhabitants of the town, who are bound to keep the fences in re-

pair. It contains 7000 acres, perhaps the largest field in the United States; and its products are apportioned to the inhabitants according to the property held by them in the town. Corn is chiefly raised, but it will yield any other kind of grain. Except in a small part near Gabarre where the bank is broken and liable to cave, it is an even and permanent plain.

Islands Nos. 25 *and* 26, *left shore channel to the right,*

These islands are united in low water by a large sand bar. A little below the point of the latter on the right, is a bar, best channel to the left, in high water a good channel to the right. Opposite the lower point of 26, is situated the

Publick Ferry. 6 96

Three miles from this ferry and about seven from St. Geneviève, is situated in a beautiful plain, the town of Kaskaskia, on the Occoa or Kaskaskia river and about five miles from its mouth. It is the oldest French settlement in the Illinois country; for a considerable time it was declining rapidly, and the houses falling into ruin; but it is again reviving and promises to become a place of importance.

Islands Nos. 27, 28 *and* 29, *on the right side.*

Channel to the left, about two miles lower down on the right bank is

Camp Roudy. 10 106

In the neighbourhood of this place is a saline at which considerable quantities of salt is made.

River St. Lora, right side. 4 110

This is a handsome stream of Louisiana.

Islands Nos. 30 *and* 31, *close to the right shore in a bend, channel left side,*

Occoa or Kaskaskia river left side, 4 114

Flin's Ferry right side.

Islands Nos. 32 *and* 33.

Opposite each other and nearest the left shore, channel to the right.

River St. Mary, left side. 4 118

Opposite this on the right shore is the fine settlement of Baubruly, extending 3 or 4 miles on the river, with some handsome improvements.

Island No. 34, *near the left shore.*

Island No. 35, *nearer the left shore.*

Islands Nos. 36 *and* 37,

Opposite the two last on the right, channel between the islands.

On the right of the lower point of the last island is an eddy, called the Great Eddy. A small stream, Cape St. Comb, enters on the same side. Miller's run enters on the opposite shore.

Island No. 38, *channel to right and left.*

Amite River, right shore. 14 132

Island No. 39, *channel right side.*

Island No. 40, *channel to the right or left.*

Three sand bars a little below, parallel to each other, channel left side of the one lying nearest the right shore.

Island No. 41, *channel right side.*

Calvin's creek, right shore, 6 138

A little distance below this creek on the same side, Mr. Fenwick resides, a very hospitable man; his improvements are extensive.

Obrazo river, right side. 4 142

On the left shore nearly opposite, in a bend of the river, is situated a rock, in which about 100 feet from the surface of the water is a singular excavation, known by the name of the Devil's Oven.

The Grand Tower, near the right shore. 2 144

This is a rock standing in the river, of about 100 feet circumference and 150 feet high.—There is a rapid current between the tower and the shore, and a narrow channel, but the main

channel is to the left of the rock. The place appears to have been designed by nature for water works on a great scale.

Island No. 42, *near the left shore.*

On the right is large sand bar, channel to the left of the island and right of the bar

Riviere de la Pomme, right side.	4	148
Muddy river, left side,	1	149

This is a considerable stream of the Illinois country. About 25 miles from its mouth, there is a large body of excellent stone coal, from which supplies for the smiths of the country are received; and some is taken even to New Orleans.

Shawnee Town, right side,	1	150

This is a large Indian village, which is the summer residence of a number of those people. They are very friendly and accommodating.

Island No. 43, *left side,*

A large sand bar projects from the head and one a little below the point of the island, channel right side.

Apple creek, right shore.	2	152
Island No. 44, *channel right side.*	5	157
Island No. 45, *channel right side.*		
Island No. 46, *channel right side.*		
Devil's Island.	6	163

Channel on the right. Just off the head of this island there is a large sand bar.

Cape Girardeau, right shore.	3	166

The town of Girardeau is the capital of a district of Louisiana territory. It was laid out by Mr. Lowrimee, who was formerly Spanish commandant; he is the principal proprietor. It is situated on a high bank, and is in a flourishing condition. The country is very fertile; and an extensive settlement stretching fifty miles back, strickes the settlement of New Madrid A post road from this place to Fort Massac and the mouth of Cumberland River.

Island No. 48.

A bar projecting from the left shore nearly reaches this island.

Island No. 49, *a little below.*

Channel either between the two islands or to the right.

Island No. 50, *channel to the right.* 3 169

A small creek enters on the left side.

Cape a la Bruche, right shore. 1 170

A small creek enters on the right. Here is a vast ledge of rocks, which stretch across the river in a direct line. The best channel in the middle of the river, in which place in low water, there is not more than 6 feet over the rocks.

Island No. 51, *close to the right shore.*

Island No. 52, *just below.*

Channel good on either side.

Island No. 53, *channel left side.* 4 174

Opposite this island is the growing settlement of Tyawapatia.

Island No. 54, *near the right shore.*

Island No. 55, *channel on either side.*

Lies opposite island 54. A small creek enters on the left side.

Tyawapatia creek, right shore. 2 176

Islands Nos. 56, 57, 58, 59, *and* 60.

A cluster of islands near the right shore.—Best channel to the left.

Island No. 61. 12 188

Here the river makes a remarkable turn called the Grand Turn. Channel on either side of No. 61.

Islands Nos. 62, 63 *and* 64.

Do not pass between these islands; channel good on the outer sides. Sixty-three and 64 lie opposite each other, a little below No. 62.

Island No. 65, 10 198

Island No. 66 lies opposite the lower point of 65 on the right, and a mile below is island 67. Channel near the right and left shore.

Island No. 69, *channel right side,* 5 203

On the right bank of the river Col. Bird, re-

sides. In passing his house you have a beautiful view of the river Ohio.

Junction of the Ohio, 1 | 204

At the confluence of the two rivers col. Bird has a large warehouse which is well conducted, and he is accommodating and friendly.

OF THE MISSISSIPPI,

ITS CHANNELS, ISLANDS, SAND-BARS, FORTS, BAYOUS, RIVERS, CREEKS, SETTLEMENTS, TOWNS, CITIES, &c.

AND THE DISTANCES FROM PLACE TO PLACE.

ISLAND *No.* 1, *below the mouth of Ohio.* 5 | 5

Lies very close to the left side of the river, opposite it, also on the same side, stands Fort Jefferson, immediately above the mouth of Mayfield creek. No. 1 is about one mile long.

Channel, in all stages of the water, is on the right shore.

Islands Nos. 2, 3 & 4, 10 *miles below No.* 1, 11 | 16

Lie nearest the left shore, and must be passed on the right; they are small and lie just below one another.

Iron banks, on the left side, 4 | 20

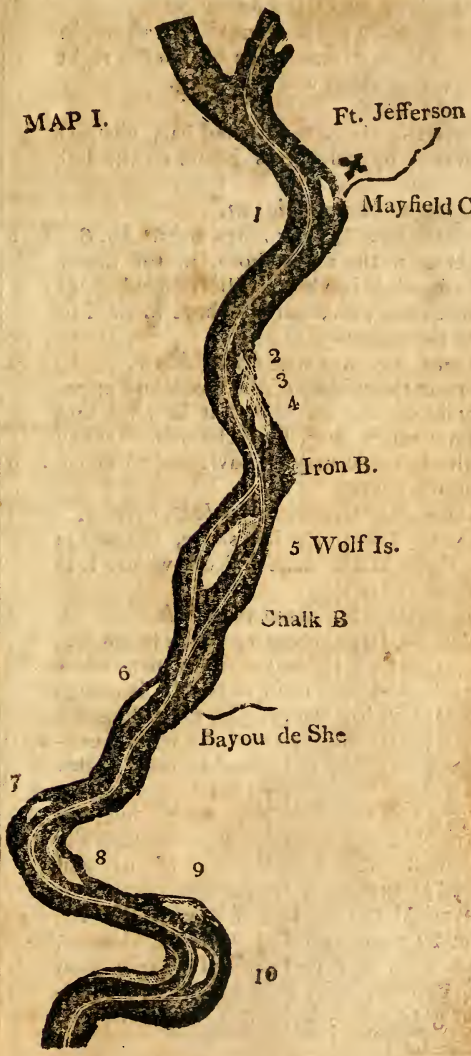
Must not go too near these banks, in order to avoid a large eddy near the shore, and immediately below them you must hug the left shore so as to clear a large sand bar putting out from the upper end of

Wolf island, No. 5, 4 | 24

(See MAP 1, *page* 179.*)*

This is a large island nearly in the middle of the river, about five miles long, in common floods both sides are navigable, the left is the best, and three miles nearest.

THE JUNCTION OF THE OHIO AND MISSISSIPPI.



Chalk Banks begin at the head of No. 5.

Sand bar, two miles below No. 5, 7 31

This bar is 200 yards from the left shore, in high water it is covered, the channel is right of the bar, it is about one mile long.

Island No. 6, 3 34

Adjoins the above mentioned bar, channel right shore, opposite this island on the left shore,

Bayou de She empties in.

Island No. 7, four miles below No. 6, 6 40

Lies close to the right shore, in the upper part of a bend, it is a large willow island about three miles long, channel left shore in all situations of the water.

Island No. 8, a mile below No. 7. 4 44

Lies near the middle of the river, and opposite a point on the left shore, it is large and about four miles long, best channel is on the right, the left side may be navigated in floods and is much nearer.

Island No. 9, three miles below No. 8, 7 51

Lies very close to the left shore, channel is on the right in all stages of the water, it is about three miles long.

Island No. 10, three miles below No. 9, 6 57

Is tolerable large, about one mile long, and, lies nearest the left shore, the rivers turns short to the right.—At the head of No. 10, is an ugly sand bar; in low water, you must hug the left shore pretty close around the bend, keeping both the bar and the island to your right. In high water, the right pass may be gone, providing you hug the right hand shore, keeping off the island; it is something nearer than the left channel. The pass between the bar and the island is extremely dangerous.

NEW-MADRID, 12 *miles below No.* 10, 13 70

About 22 years ago Col. George Morgan, formerly of New-Jersey, late of Washington county, Pennsylvania, in company with several other gentlemen, laid out a town here on a

large scale, which they called New-Madrid. It contains but a few houses, and is situated in a beautiful tract of land on the right bank of the river, in lat. 36° 30 N. Just above New-Madrid a creek puts in, and to effect a landing here you must keep to the outer edge of the counter current until you are below the mouth of the creek, then by pulling into the lower point of the eddy you can make a landing with safety and ease, and the nearer you land to the mouth of the creek the better, for opposite the town the bank is high and continually falling in.

Island No. 11, 5 75

Is on the right side, and close to the upper end of a bend, channel is on the left shore it is about two miles long.

Island No. 12, *about* 2 *miles below No.* 11, 4 79

Pass this island on the right side, it is about two miles long.

A sand bar below No. 12, *about three miles long.* 5 84

Channel on the right side. This bar is nearly a mile in length.

Island No. 13, *about* 3 *miles below the bar,* 4 88

It lies near the left shore, channel on the right shore, it is about three miles long.

Island No. 14, *nearly one mile below No.* 13. 4 92

Is on the right side, and on the left side of it are four or five willow islands, take the left side of these islands in all stages of the water; in very low water a sand-bar which joins them makes its appearance; these islands are about three miles long, with drift wood on their points.

Island No. 15, *better than* 2 *miles below* 14. 5 97

Is pretty large, lies close to the left side, take the right channel at all times; it is about three miles long.

Little Prairie, about 3 *miles below No.* 15, 6 103

Here is a small settlement on the right bank of the river about two miles long.

Island No. 16, 2 *miles below the last house*, 4 107

It lies very close to the right side of the river, and opposite it on the left side is another small

Island No. 17,

Take the left side of both, except in high water, when you may go between them; No. 16 is about 5 miles long.

Island No. 18. *one mile below No.* 17, 6 113

Lies close to the right shore; opposite the upper end of No. 18, on the left, is a bar, may go on either side of the bar, but next the island keeping it to the right is the best and nearest. No. 18 is about three miles long.

Island No. 19, *opposite the middle of No.* 18.

And extends one mile below it, lies close to the left shore, channel on the right or between them.

(See MAP 2, *page* 183.*)*

Island No. 20, *just below No.* 19. 4 117

Is on the left shore, pass it on the right, it is about two miles long.

Island No. 21, *is opposite lower point of* 20, 2 119

Lies near the middle of the river, channel on the right, but in floods the left side may be gone and is nearest, it is about three miles long.

Island No. 22, 1 *mile below* 21, 4 123

It lies in the same range with the above, pass it on the right, though in high floods you may go on either side, it is about two miles long.

Island No. 23, *nearly a mile below* 22, 3 126

You may take the left in high but the right side in low water is best, it is about one mile and a quarter long.

MAP II.

12
N. Madrid
11
14
13
Little Prarie
18
15
9
17
21
22
23
24
Bayou R
25
L. Reach
26
27
28
29

Island No. 24, *is* $\frac{3}{4}$ *of a mile below* 23,	2	128
Lies close to the left shore, pass it on the right in all stages of the water, as well as 19, 20, 21, and 22, these last six islands surround one point; 24 is about one mile and a half long.		
Bayou river, half a mile below No. 24,	2	130
Is about fifty yards wide at its mouth, enters on the left bank.		
Three or four Willow islands, about a mile below Bayou,	1	131
These are small and lie on a very large sand-bar joining the right shore, channel on the left; they are nearly two miles long.		
A sand-bar one mile below the Willow Is.	3	134
This bar is large and covered with willows, and joins the left shore, it is about a mile long; pass it on the right.		
Island No. 25, *six miles below the bar,*	7	141
Lies near the middle of the river, channel good on both sides, is about two miles long; from this island you have a beautiful view of the *Long Reach, which is* 10 *miles in length.*		
Island No. 26, *three miles below* 25,	5	146
It is about three miles long, and lies near the left shore; immediately below commences		
Island No. 27, *still nearer the left shore,*	3	149
This is a large island, about four miles long; pass both these islands on the right, according to the white line in Map 2, page 183		
Island No. 28, *about a mile below* 27,	5	154
This is a willow island, about two miles long, lies close to the right shore, pass it on the left side.		
Island No. 29, *is opposite the middle of* 28,		
It is small and lies close to the left shore, pass it on the right; it reaches perhaps half a mile below No. 28		
The river at the lower end of Long Reach turns to the right, and here you have another Reach of about nine miles long, and a beautiful view of the river for that distance.		

(See MAP 3, page 186.)

Island No. 30, *half a mile below* 29, 3 157

Is about two miles long, lies nearest the left shore, pass it on the right. At the lower point on the right side is a large sand bar.

Isl. or Sand-bar, No. 31, 2 *miles below* 30, 4 161

This island is very narrow and lies very close to the right shore; you must take the left side of it at all times. Opposite the head of No. 31, is a sand bar; you can go on either side of it, but the left side is the best. It is about three miles long.

Island No. 32, 2 *miles below* 31. 5 166

Is a large and high sand island with some willows and drift-wood upon it, lies close to the right side in a bend. You can pass on either side of No. 32. If the water be high, you may take the right side, and keep pretty close to the first right hand point, in order to take the right side of No. 33, which is safe. But if the river below, you must take the left side of No. 32, in order to take the left side of a bar opposite the first right hand point; and likewise take the left side of No. 33. No. 32, is about 2 miles long.

Flour island, No. 33, 6 *miles below* 32, 8 174

Is near the middle of the river, which bends much to the right. You must take the left side of this island in low water; when the water is high you can go on either side. Just above No. 33, is a large sand-bar; to avoid it, you must, in low water, keep it on the right, and hug the left shore pretty close, which will render the passage easier round the island. If you are unfortunately drawn into the right channel keep as near the right shore as possible, and prevent yourself from being thrown on the side of the island to which the current sits powerfully, and which is filled with dangerous snags, sawyers, &c. No. 33 is about one mile and a half long, and is said to take its name from flour-boats having got wrecked upon it.

Upper Chickasaw Bluffs, on the left side. 2 176

30
31
33
32
Chickasaw Bluffs
34
2d Bluffs
35
37
36
MAP III.
3d Bluffs
38
39
40
41
Wolf R.
Pikes F.
4th Bluffs
42
43
44
45
F. Pickering

They begin at the lower point of No. 33, and continue down about a mile.

Island No. 34, *3 miles below* 33, 4 180

Lies about the middle of the river, and is nearly four miles long. In low water, you must take the right side of this island. There are two small islands close to No. 34, which may be considered a part of it, and the navigator must never attempt to go between them and the large one. A small outlet makes out on the left shore nearly opposite the middle of 34.

Second Chickasaw Bluffs, 3 *miles below* 34. 7 187

These are on the left shore, the river turns short to the right, and is very narrow, you may suffer your boat to drift as near them as you think is safe.

Island No. 35, *about* 3 *miles below 2d Bluffs.* 3 190

Lies nearest the left shore, in floods the left passage is good and about three miles and a half the nearest, in low water the right channel must be taken. This island is about six miles long.

Island No. 36, *about* 2 *miles below No.* 35. 8 198

Lies near the middle of the river, is about eight miles long, opposite it on the right bank, is what is called the *Devil's Race Ground.* Navigators differ about the safety of the channels past this island: some recommend the right pass in low water, which is now much better than it was a few years ago, and much wider than the left, and 4 or 5 miles the nearest; and if taken, the right point must be hugged pretty close, in order to keep off the island, which is full of sawyers and dangerous snags, and to which the current draws powerfully. If the left pass be taken, which seems to be most approved of, you must keep pretty close to the left shore at the head of the island. Near the shore and on the left of the island is a sand bar. About two miles below the head of the islnd you come to the

Third Chickasaw Bluffs, left shore,
Which are not difficult to pass, and are about three quarters of a mile in length.

Island No. 37, 2 *miles below* 36, 10 208

Is a willow island, lies near the right shore, and is united to No. 36, by a bar ; channel on the left shore, but not too close to it, for fear of being sucked into one of the three out-lets which run out from the left shore about a quarter of a mile below each other, and nearly opposite the lower point of No. 37. These three out-lets unite and return into the river about 5 miles below.—No. 37 is about two miles long and the out-lets one mile from the first to the third. Some navigators say that the right side of No. 37 ought to be taken at all times ; and if the water be low, keep pretty close to a bar that puts out from the right shore.

A willow Beach and sand bar. 3 211

Just below the out-lets, and on the same side ; here the river bends short to the left; and as the bank is low, the current draws strongly to the right shore. Some care is necessary to prevent your boat from being drawn into the channel to the right of No. 39, about 3 miles below the last outlet. About one mile below and on the right side may be found pretty good landing along a willow shore.

Island No. 38, 3 *miles below last out-let,* 3 214

Lies nearest the left shore. Here are three passages in consequence of another island, No. 39, lying to the right of No. 38, the middle channel is preferred in all stages of the water, the one to the right of No. 39 is seldom gone, it being about ten miles round, and the one to the left of No. 38 is only navigable in high water, when the current is remarkably rapid, channel narrow and dangerous, it is better than a mile through. The navigator in taking the middle pass must take care to hug the left side of No. 38, and a bar adjoining, to avoid being driven against No. 39. The river at this place makes

a sudden turn to the left, and is said to be the greatest bend between the Ohio and New-Orleans. It is called the Devil's Elbow. No. 38 is about 2 miles long.

Twelve Out-lets, nearly a mile below 38, 4 218

These are small, and on the right shore.

A sand and Willow Beach, one mile below, 1 219

It joins the right shore; on this beach are large quantities of drift wood and rafts; it is about two miles long.

Island No. 40, 2 *miles below the Beach*, 4 223

Lies nearest the left shore, take the right side of this island in all stages of the water.—About half a mile below the head of No. 40, is a small island middling close to the right shore, take the left side of it, and about a mile below on the left shore, there is a large sand bar, take the right side of it. No. 40 is about 4 miles long.

Island No. 41, 2 *miles below* 40, 6 229

It lies near the right shore, and adjoining it is a bar, channel on the left of both. No. 41 is nearly a mile long.

Islands Nos. 42, 43, 44 *and* 45, 3 *miles below*, 4 233

Lie in a bend of the river, the two nearest the left shore, viz No 42 the upper, and the other No. 45. the one on the right of these is the largest, No. 43. and the one nearest the right shore is No. 44. On the right side of the island next to the right shore is a sand bar, take the right side of it, as well as of all the islands in low water—In high water any of the passes may be gone in safety—From the head of the first to the foot of the last is about six miles.

Wolf river, 1 *mile below No.* 45, 7 240

This is but a small river, entering on the left shore. Opposite Wolf river on the right side of the Mississippi, is an old Spanish Fort, now nearly demolished—A short distance below this river stands

Fort Pike.

Here a good landing may be effected by pulling over towards the left shore immediately after you pass the four islands.

Fourth Chickasaw Bluffs commence here,

Which are about 2 miles long, at the foot of which is

Fort Pickering, two miles below Pike, 2 242

This fort was erected sometime after that of Pike. Fort Pickering is an eligible situation for a garrison, as it occupies the commanding ground of the fourth Bluffs. The fort stands on the left side of the river, in the Mississippi Territory.—The United States have a factor here, but the settlement is very thin; it generally consists of what is called the half breed, which is a mixture of Indians and whites.

(See MAP 4, page 191.)

Island No. 46, *about* 1 *mile below,* 1 243

Lies nearest the left shore, the left passage, as well as the one between this and No. 47, is good in high water and much the nearest, but the right of both must be taken when the water is low; No 46 is about 11 miles long.

Island No. 47, *opposite* 46,

It is small and lies on the right side—At low water a chain of rocks may be discovered extending from the head of No. 46 to the left shore.

Islands Nos. 48 *and* 49 *are to the right and opposite the foot of No.* 46. 11 254

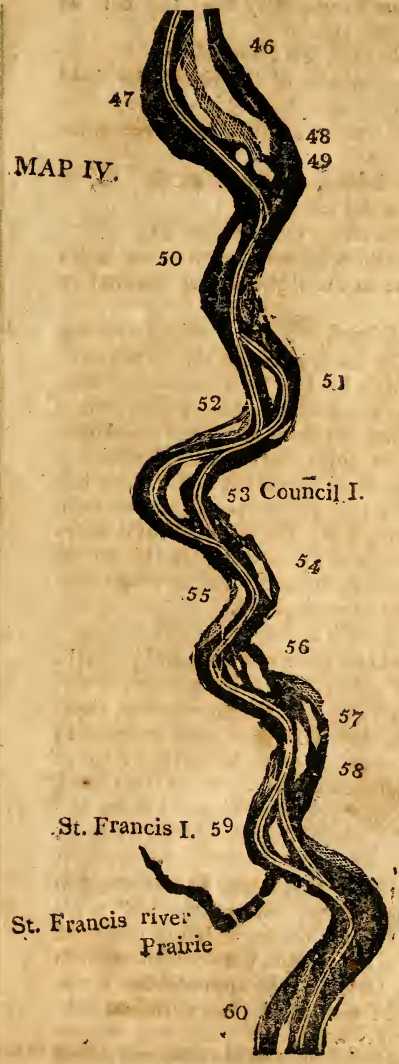
The right side of these two islands must be taken in all situations of the water; on the right of No. 49 and adjoining it is a sand bar—Nos. 48 and 49 are 2 miles long.

Island No 50, 2 *miles below No.* 49, 4 258

It lies pretty close to the right shore, channel left side; it is about two miles long.

A sand bar, 3 *miles below No.* 50, 5 263

This bar is about one mile long, lies nearest the left shore, take the right side, and when


MAP IV.
46
47
48
49
50
51
52
53 Council I.
54
55
56
57
58
St. Francis I. 59
St. Francis river
Prairie
60

the water is low keep pretty near the bar, so as to take the left side of

Island No. 51, 2 *miles below*, 3 | 266

Lies near the middle of the river, the right side is something nearest, and is safe in a middling state of the water; it is about three miles long.

A willow island, between 51 & 52,

Lies close to the left shore.

Island No. 52, 4 *miles below* 51, 7 | 273

Is a large willow island, about three miles long, lies close to the right shore, channel on the left side.

Council Island, No. 53, 1 *mile below* 52, 4 | 277

Lies near the middle of the river, take the left side of this island at all times—One mile below No. 53, is an outlet, just below which is a good landing around a small point—About half a mile below this point, is a small sand bar a little distance from the right shore; the left side of it is the best channel—The river here turns short to the left; No. 53 is about 4 miles long—The bends of the river from this to St. Francis river are particularly full of snags, &c. and the current is very rapid.

Out-let, 1 *mile below* 53, 5 | 282

This out-let is on the right side, and is small.

Island No. 54, 3 *miles below the out-let*, 3 | 285

Lies nearest the left shore, channel right side, in floods the left side may be gone in safety; about half a mile below the head of No. 54, and about one fourth from the island, is a large sand bar; best channel is on the right side of it also—It is about 3 miles long.

Island No. 55, *opposite lower point of* 54,

On each side of this island is a channel in all stages of the water, that on the left* must invariably be taken; the right being the most formidable and dangerous between the mouth of Ohio and Orleans; in approaching it the navigator must use more than common cau-

* Some say take the right hand schute—hug close to the right hand sand bar.

tion, as the right channel takes the greatest part of the water, and the draught into it extends full half way across the river; it takes off likewise at right angles, and is not seen till you are very near it; so that a boat is often drawn into the centre of its current (which is a very powerful one) before even the island is discovered, from whence a retreat is impossible, and nothing but great address on the part of the boatmen can save them from destruction; the only method to avoid this is to keep well over to the opposite shore for some distance before you expect it—Just above this island is a willow bar, which keep on the right.

Island No. 56, 2 *miles below* 55, 6 291

Here are three islands pretty close to the left shore, but in low water they have more the appearance of one than three, therefore we include them all in No. 56, the right side is the principal channel, they are about three miles long—About a quarter of a mile above the foot of the last of these islands, in the bend on the right shore, around a small point, is a tolerable good landing.

Island No. 57, 3 *miles below* 56, 6 297

This is a small willow island, lying near the middle of the river—Channel left side in low water.

Island No. 58, *lies close to the right shore*,

And a little below the upper point of No. 57, and extends about two miles below it; the left side of both these islands is to be preferred in low water; the pass is pretty good between them—In a bend on the left shore and above these islands, is a large sand bar.

St. Francis' Island, No. 59, 3 *miles below* 58, 8 305

This island lies in the middle of the river, is large, channel is good on both sides, the left is the best and nearest, current is very rapid;

it is about three miles long—Just below the foot of No. 59, on the right side,

St. Francis' river empties in on the right.

This is a handsome river, about 200 yards wide at its mouth—Its current is very gentle, and is said to head near St. Louis.

Big Prairie, 3 *miles below St. Francis*, 6 | 311

This is a beautiful situation on the right side of the river, and the land is very good—One mile and a half back from the river, is a handsome lake 2 miles wide and 5 long; it abounds with swans. This lake is supported by streams flowing from hills 2 miles back, and empties itself into the Mississippi by a large creek opposite No. 60.

Island No. 60, 3 *miles below Prairie*, 3 | 314

Is a willow island, near the middle of the river, in high water both sides are equally good, it is about 1 mile long, when the water is low the left must be taken; for the distance of 20 miles below this, are good landing places on both sides of the river—About 12 miles below No. 60 in the middle of the river, in a left hand bend, there is a large flat bar; in low water the left side of it is the best channel.—Between 60 and 61, there are a number of short bends full of snags, and having a very rapid current.

(*See MAP 5, page* 195.)

Island No. 61, 21 *miles below* 60, 22 | 336

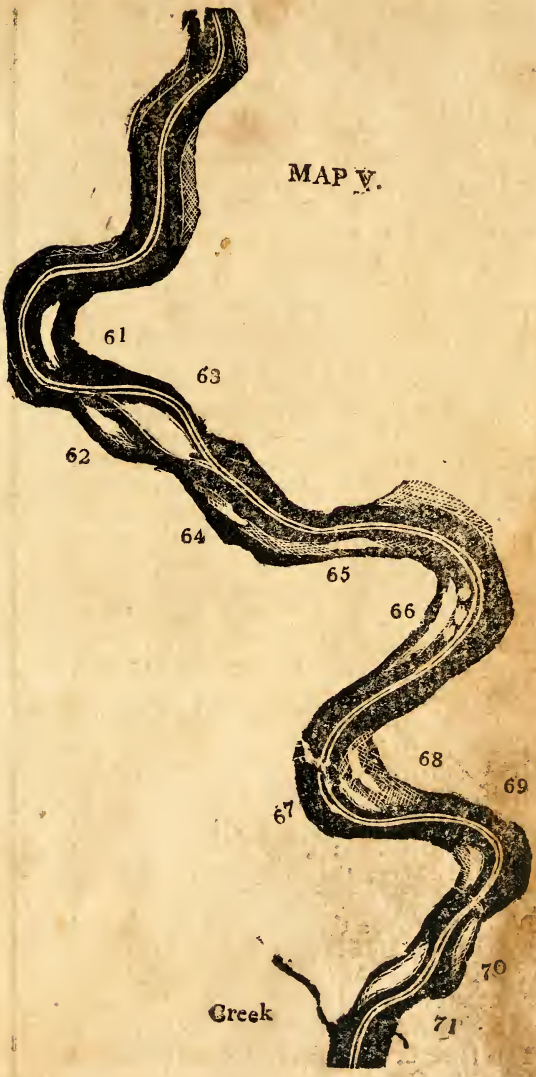
Close to the left shore, channel on the right side, the left is too narrow to be safe. No. 61 is about three miles long; between 60 and 61 the shores are lined with willows.

Island No. 62, *three miles below* 61, 6 | 342

Is covered with willows and cotton wood, it lies close to the right shore, channel left side; it is about two miles long; nearly opposite the lower point of this, rather on the left shore, [illegible]ins

Island No. 63,

The channel on either side is good, the left


MAP V.
61
63
62
64
65
66
68
69
67
70
Creek
71

is much the furthest and is full of sawyers.—Just above the head of this island is a large sand bar; when the river is in a middling state, you can go between this bar and No. 62, when it is low you cannot pass to the right of it; in very low water, the channel between this bar and No. 63, is narrow, and full of snags and sawyers, and the current is very rapid; the safest channel is on the left side of it. This island is about four miles long; No. 63 appears first to view.

Island No. 64, 3 *miles below* 63, 9 351

The left channel of this is preferred in all stages of the water, the right side may be gone in floods with safety; it is about three miles long. There is good landing immediately below the point on the left shore.

Island No. 65, 3 *miles below* 64, 6 357

Is small and lies in a bend on the right side, channel on the left, it is about two miles long.

Island No. 66, 4 *miles below* 65, 6 363

Lies pretty close to the right shore, is covered with willows and cotton wood, in low water it is joined by a large sand bar and three small islands on the left side, the heads of which are covered with drift-wood: the left channel of these must be taken at all times. No. 66 is about four miles long.

Islands No. 67 *and* 68, 5 *miles below* 66, 9 372

These lie side by side and nearly in the middle of the river, in floods go between them, in low water the right of both must be taken, never venture to the left of both; No. 67 is on the right of No. 68; these islands are about three miles long; the river bends to the left.

Island No. 69, 3 *miles below* 68, 6 378

Lies close to the right shore, is small, and has on its left side a large willow and flat sand bar, channel on the left at all times: No. 69 is about one mile and a half long.

Island No. 70, $2\frac{1}{2}$ *miles below* 69, 4 382

This is small and lies close to the left shore

under a willow point at the upper end of a bend, channel on the right must be taken in all situations of the water; No 70 is about one mile and a half long.

Island No. 71, *half a mile below* 70, 2 384

Is on the right shore, on the left side and near the lower point of the island is a large sand-bar which appears even in very high water, take the left side of both at all times; in a bend on the left shore is an outlet, which runs out in high water with great velocity, keep out from this bend. No. 71 is about four miles long.

A creek 4 *miles below* 71, 8 392

Empties in on the right shore in a bend, and on the opposite side is a long willow point, extending down the river for a considerable distance; this has a very pleasant appearance; one mile below the creek is an old water pass, which is noticed from its now being grown up with willows, on each side of which are large trees; a little further down is another small, old outlet.

(*See MAP* 6, *page* 198)

Island No. 72, 5 *miles below the creek*, 5 397

Lies very near the right shore, the left side must always be taken in low water, the right may be navigated in floods, but the passage is something longer; No. 72 is about two miles long. Opposite the head of this island and on the right shore

White river empties in,

Where there is excellent landing. About 3 miles up this river is a channel which runs across the country and empties into the Arkensas river twenty miles above the mouth of the latter; this is a much nearer route to the post and village of Ozark, which is about 30 miles above this water pass, than going in at the mouth of the Arkansas.

Island No. 73, 4 *miles below* 72, 6 403

Lies very near the right shore, opposite the

72
White R.
73
74
Arkensas R
75 Ozark I
MAP VI.
76
Creek
Cypress Bend
77
78
79
80
81

middle of this island on the left side of it is a bar, which shews in low water, keep both to the right. No. 73 is about three miles long.

Island No. 74, 6 miles below 73, 9 | 412

A large flat willow island, close to the right shore, in high floods this island is cut through in several places by the current, which gives it the appearance of several small islands, at its head it is covered with drift-wood, channel always on the left, the right being very dangerous. No. 74 is about five miles long.

Ozark or Arkansas river, 2 miles below 74, 7 | 419

Empties in on the right shore, and is navigable for a considerable distance up, the village of Ozark is about 50 miles above its mouth.

Ozark island, No. 75, 3 miles below, 3 | 422

Lies nearest the left shore, in low water take the right channel, in floods the left may be gone in safety, and is the nearest; No. 75 is about 3 miles long.

Island No. 76, 8 miles below 75, 11 | 433

Lies in the middle of the river. The left side of No. 76 is the best in low water; the right is the nearest. Opposite the foot of No. 76, close in to the right shore, you will see a very small island, from which no danger need be apprehended. No. 76 is about 4 miles long. Four miles below No. 76 is a sand bar in the middle of the river; in low water the left side should be taken, where the principal current will be observed to draw; at such times the channel on the right does not afford sufficient water for a heavy boat.

A sand bar, 4 miles below 76, 8 | 441

In the middle of the river, this bar appears only in very low water, channel good on either side; it is about half a mile long.

Island No. 77, 2½ miles below, 3 | 444

Lies close to the left shore, the right channel must be taken at all times; on the right shore is a large cypress bend, here a creek empties

into the river; the river here begins to widen, and turns gradually to the left for seven or eight miles. No. 77 is about 3 miles long.

Island No. 78, 4 *miles below* 77, 7 451

Lies close to the right shore, channel on the left, the right being much obstructed by drift-wood, it is about two and a half miles long.

Island No. 79, *opposite* 78,

And extends about two miles below it. No. 79 lies near the middle of the river, and you must go between it and No. 78 in all stages of the water—hug the left of 78 and the right of 79, to clear four small islands lying between it and the right shore. In a bend on the left shore is a small island. There is no current to the left of 79 in a middling state of the water.

Island No. 80, $3\frac{1}{2}$ *miles below* 79, 8 459

Close to the right shore, and on the left side of it is

Island No. 81, *very small.*

Pass both on the left side. No. 80 is about two miles long.

(See MAP 7, *page* 201.*)*

Outlet, 7 *miles below No.* 80, 9 468

On the right side, its mouth is filled with drift-wood, it returns into the river again a considerable distance below No. 82.

Island No. 82, 1 *mile below the outlet*, 1 469

Pretty close to the right shore, take the left side, may go on the right in floods but is not safe. No. 82 is about five miles long.

Island No. 83, 9 *miles below* 82, 14 483

Lies near the middle of the river, which turns suddenly to the right, the left pass may be gone in safety, but the right is the best and much the nearest, keeping near the right shore to avoid a flat bar that runs out towards the right shore from the head of the island. About 3 miles below No. 83, and about one-third from the right shore, is a sand bar; in low water take the left side of it. At the foot of No. 83 close to the right shore, is a small island; keep it to the right. No. 83 is about 3 miles long.

MAP VII.

Island No. 84, 4 *miles below* 83. 7 490

Close to the left shore, channel on the right at all times, it is about two miles long.

Island No. 85, 9 *miles below* 84, 11 501

Pretty close to the right shore, is covered with willows, channel on the left side at all times, here a good landing may be effected by putting to under the points, or below the island. No. 85 is about two miles long.

Islands Nos. 86 & 87, 7 *miles below* 85, 9 510

These lie nearly in the middle of the river and opposite each other, and in low water are joined by a bar, the left side is the main channel in low water, in floods the right may be gone with safety and is something nearest, do not venture between them. They are about three miles long.

Island No. 88, 2 *miles below* 87, 5 515

Lies nearest the left shore, the right channel though the longest is the best and widest, the left is good in floods. No. 88 is about four miles long.

Island No. 89, 4 *miles below* 88, 8 523

Is small and lies close to the right shore, the left channel must always be taken; it is about two miles long.

Grand Lake, 1 *mile below* 89, 3 526

Here the old bed of the river is supposed to have run through that part which is now grown up with willows, and which is distinctly marked by the lofty trees on both sides, this is first seen on the right side and then crosses the present channel diagonally; in the old bed on the right side is seen a beautiful island, remarkable for the large trees on it, and its being surrounded with willows; on the left side between the old bed and the present channel is another, called

Seary's isl. No. 90, *about* 3 *miles long*,

Which is formed by the old bed, now grown up with willows on the left, and the present channel on the right.

Island No. 91, 4 *miles below* 90, 7 533

Is a small willow and cotton-wood island in the middle of the river. In low water you must take the right side of this island; when the river is up, you may go on the left side of it, which is something the nearest, but the current is slow. No. 91 is about a mile long.

Island No. 92, *seven miles below* 91, 8 541

Lies near the middle of the current, river turns to the right, in tolerable high water the right channel is preferred, in low water you must take the left side. It is about three miles long.

(See MAP 8, *page* 204.*)*

Island No. 93, *three miles below* 92, 6 547

Lies in the middle of the river. At the head of this island two dangerous bars run out from each side of it, and the proper channels, (the left being the best in low water,) are close to either shore, avoiding the island as much as possible. At the foot of No. 93 is a whirlpool, which, if you happen to get into it may do no other injury than detain you a little while and whirl your boat around a few times before you get out of it. It is about three miles long; here commences the

Nine-mile Reach.

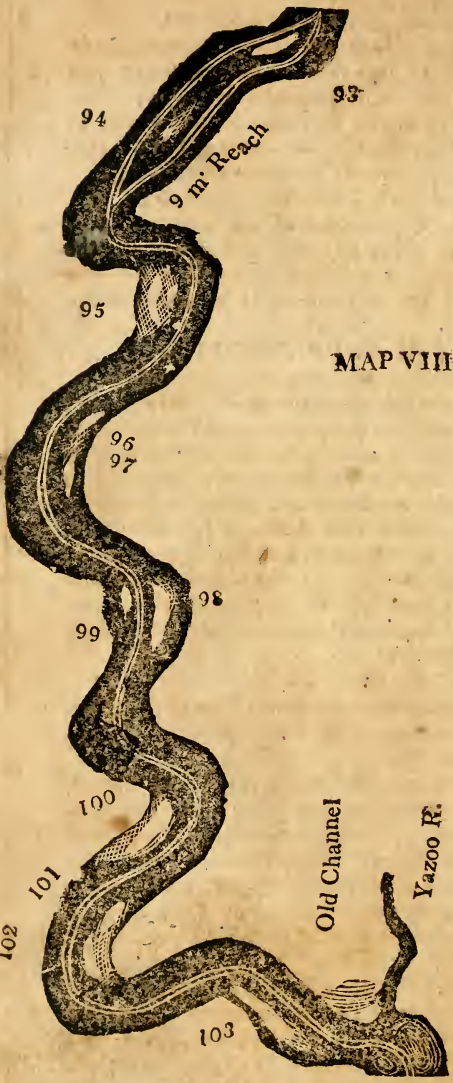
Where you have a beautiful view of the river.

Crow's nest island No. 94, 6 *miles below* 93, 9 556

This is a beautiful island, remarkably small, being not more than half a mile in circumference. It is in the middle of the river, and about the middle of the Nine Mile reach. The best channel is on its right side in low water. The navigator must take care to keep close to the right shore above 94 to avoid a sand bar at the head of the island.

Island No. 95, $6\frac{1}{2}$ *miles below* 94, 7 563

Lies close to the right shore, and on the left of it is another small island, take the left side of both. No. 95 is about two miles long; the the river bends to the right.



MAP VIII.

Island No. 96, 8 *miles below* 95,	10	573
Near the left shore, river bends to the left, channel right side, it is about one mile long.		
Island No. 97, *about one mile below* 96,	2	575
A willow and cotton-wood island near the left shore, in floods it is divided by the river running through it in several places, channel on the right side, it is about two miles long.		
Islands No. 98 *and* 99, *5 miles below* 97,	7	582
These lie in a bend and nearest the right shore, 98 is the largest and lies to the left of 99, the channel between them ought to be preferred in all stages of the water, to the left of 98 may be gone in floods; the river bends to the right; 98 is about four miles long.		
Island No. 100, 12 *miles below* 98,	16	598
Is a large willow and cotton-wood island lying near the right shore, to the right of which is a small island, channel on the left of both; No. 100 is about 4 miles long.*		
Islands No. 101 *and* 102, 3 *miles below* 100,	7	605
These lie in a bend, 101 lies close to the left shore, 102 to the right of it and extends a little below it, channel on the right of both, the river bends to the left; from the head of 101 to the foot of 102 is about four miles.		
Island No. 103, 12 *miles below* 102,	1[illegible]	216
Lies below a point on the right shore, channel on the left, the right channel may be gone in floods but it is not so safe although much the nearest; opposite 103 on the left side is good landing along a willow shore; the river bends to the right; No. 104 is about four miles long—Opposite the head of this island on the left shore the old bed of the river may be dis-		

* The two islands between which we had just floated, are mentioned improperly in the Navigator, as one island, which is numbered 100. The channel between is very narrow, the ship channel in this stage of the water being evidently to the right of both, and a small willow island besides to the right of them. The second of the islands is properly No. 100.

Cuming's Tour.

covered, it runs across from thence to the Yazooz river and enters it about two miles above its mouth, the tract is particularly marked by the young willows with which it is now filled.

Yazooz river, 4 *miles below* 103, 8 629

Enters in on the left side, both above and below its mouth is a large willow beach ; in passing the Yazooz you must keep rather nearest the right shore to avoid the eddies on both sides of the river. The Yazooz rises in Georgia, and the name is rendered famous from the noise which has been made about the lands bordering its banks, which are now well known by the name of the " *Yazooz Speculation.*" It is gentle in its current, and is about 280 yards wide at its mouth Its surface is frequently covered with swans, wild geese, &c. It enters the Mississippi at nearly right angles, and is about 112 miles above Natchez.

(*See Map* 9, *page* 207.)

Walnut Hills, 12 *miles below the Yazooz*, 12 641

The scite of Fort M'Henry is still to be seen on the top of these hills, which form an eminence considerably above the adjacent tree-tops. Here is a large eddy which you must avoid getting into—good landing just below the eddy.

The Walnut Hills are so called from a tree of that name (juglans nigra) with which they formerly abounded. A beautiful stream of water falls from the hills into the Mississippi, but notwithstanding its favourable appearance it is of a bad quality—Peach trees bloom here in the middle of February.

Island No. 104, 13 *miles below Walnut Hills*, 13 654

Close to the left shore, channel right side at all times. It is about four miles long.

Island No. 105, 3 *miles below* 104, 7 661

Close to the right shore, take the left channel, it is a small willow island, one mile long.

Palmira Island, No. 106, 3 *miles below* 105, 4 665

Walnut Hills
Ft. M'Henry
MAP IX.
104
105
Palmira I. 106
Palmira
107
109
108
110
Big Black C.
Grand Gulph
Bu. Pierre
Judge Bruin's
Petit G.

Near the middle of the river, channel on the right side is best, in high water the left may be gone with safety; it is about four miles long.

Palmira settlement,

Is on the left side of the river, and begins a little above the head of Palmira Island.

Island No. 107, 2 *miles below* 106, 6 671

Channel good on either side, two miles long.

Island No. 108, 1 *mile below* 107, 3 674

Lies nearest the left shore, the left channel is safe in high water, if you take it must hug the left point above; the right side of both of the above islands is the main channel. No. 108 is about two miles long.

Island No. 109, *about* 2 *miles below* 108, 4 678

Lies close to the left shore; pass on the right side at all times; it is about one mile long.

Island No. 110, 5 *miles below* 109, 6 684

Lies near the right hand point, channel in floods is good and nearest on the right, the left must be gone in low water; it is about three miles long.

Big black creek, 5 *miles below* 110, 8 692

This creek enters on the left side, and is pretty large.

Grand Gulph, 1 *mile below*, 1 693

Here are large eddies on both sides of the river, try to pass these without being drawn into them, the one on the left is most dangerous, the water beats with great violence from the point on the right side, the channel runs rather nearest the right shore.

Bayou Pierre, 10 *miles below*, 10 703

This creek enters in on the left shore—Thirty miles by water up this creek is the thriving village of Port Gibson.

Judge Bruin's, 1½ *miles below*,

If you wish to land here it is best to pull in a little above Bruin's house, as the water runs

with great velocity past the settlement. This gentleman's hospitality and politeness to navigators, seem to be highly spoken of by those who have occasion to call on him—His farm is a very handsome one, on the left side of the river.

Petit Gulph, 8½ *miles below Bruin's*, 10 718

Here are eddies on both sides of the river, keep near the middle of the current.

(See MAP 10, page 210.)

Island No. 111, 2 *miles below Petit Gulph*, 2 715

Lies close to the right shore, main channel on the left side; in very low water a bar appears between the head of this island and the left shore, may go on either side of this bar; No. 111. is about four miles long.

Island No. 112, 6 *miles below* 111, 10 725

Close in a bend on the right shore, and about half way down it, and near the left shore, begins

Island No. 113, *much larger than* 112,

Channel in low water is between the islands, in floods the left of 113 is safe and much the nearest, the river bends to the left; from the head of 112 to the foot of 113 is about four miles.

Cole's creek, 6 *miles below* 113, 10 735

This creek empties in on the left shore at a bend, the river here winds considerably to the right.

Fair Child's Island, No. 114, 7 *miles below*, 7 742

Is large and lies pretty close to the left shore, if the water be low you must pass on the right, may go on the left side in floods, which is five or six miles nearest; the river here bends to the left; it is about five miles long. About six miles below this the river again winds to the left, and then turning to the right, you arrive at

111
112
113
MAP X
Fair Child's L. 114
Cole's Cr
Natchez
St. Catherine's Cr.
Ellis' Cliffs
115
116
117

THE CITY OF NACHEZ, 17| 759

Occupies a very handsome situation and one that is uncommon on the Mississippi. It is built on a hill nearly perpendicular of about 200 feet in height from the surface of the river. This hill called the Bluff, affords a fine prospect up and down the river for two or three miles each way. The houses in Natchez are mostly frame, with a great many doors and windows, for the admission of the cool breezes in the hot months; they are low, being generally but one story high, and constructed principally for the convenience of business. The city contains about 300 houses. The Bluff on which the town stands is about 200 yards from the river, and the intermediate space, called the Landing, is covered with a number of dwellings, taverns, dram-shops, and trading houses. The bank being composed of a rich loose sand, the river is constantly making encroachments into this plain or bottom, and will in a few years, most probably, run close to the foot of the Bluff, and entirely annihilate this part of the city.

There is but one road from the Landing up the hill, along which are several Orange and Liquor shops, situated on the brink of the precipice. Though these shops might be undermined by a heavy rain, and precipitated down a steep of 100 feet, yet, such is the temerity of their holders that they do not seem to think of the danger they are in.

In the year 1805, a large portion of the Bluff on the lower border of the town sunk in to a considerable depth; some houses were destroyed, and others moved off with the earth without sustaining any injury.

Here are established several large mercantile houses, which are much engaged in the cotton business, and many others less extensive; and a ware house has been lately established for the storage of goods by James C. Wilkins & Co. who also do business on commission. The city has two printing offices, issuing weekly gazettes, a number of publick inns, and many of the mechanick branches are carried on.

The staple commodity of this country is cotton, which is raised to great perfection, and with large profits to the planters, who accumulate immense fortunes by following it for a few years. Vast quantities of it are exported from Natchez yearly, to the different seaport towns in the United States, and to many of those in Europe; England particularly, whose manufacturies of cotton indeed depend very much on the American cotton planters for their supply of that article.

Indigo, rice, flax, tobacco, hemp, and pease, are cultivated here with great success, and some sugar is made. Black cattle and sheep thrive well.—The Natchez country produces Maize or Indian corn, equal if not superior to any other part of the United States; the time of planting it is from the beginning of March until the beginning of July. The cotton is generally planted in the latter end of February and the beginning of March. Wheat does not succeed well; Rye has been raised in some places with success. Plumbs peaches, and figs are abundant; apples and cherries are scarce. The same kinds of vegetables raised in the middle states succeed here generally.

The same kind of mounds or tumuli found in different parts of the Western country bordering the Ohio, and indeed thoughout the United States, are also discovered in the Natchez settlements. In all parts where new plantations are opened, broken earthen ware is to be met with; some pieces are in tolerable preservation, and retain distinctly the original ornaments; but none of it appears to have ever been glazed.*

From the circumstance of the *Indian-ware*, as it is called, being found, it would appear that this country must have been thickly settled, centuries ago perhaps, with a people much better acquainted with the arts than any of the Aborigines of North America ever did or do now pretend to boast.—This is a subject often touched upon by historians and speculative wri-

* Ellicott's Journal.

ters; But both early and late writers seem to be equally in the dark as to the period at which those settlements might have been made, how long they continued by whom or what nation or language of people made them, the cause of the total extinction or banishment of the settlers—and finally, they are all equally confounded in the dropping of this link in the great chain of human events.—Not unlike the sea, whose waves are bounded by a Divine order, is man's mind —the same thing may be said of both, "so far shalt thou go and no farther."

Pope on the limitation of man's researches, has the following judicious observations:

"Say first, of God above, or Man below,
"What can we reason, but from what we know?
"Of man, what see we but his station here,
"From which to reason, or to which refer?
"Through worlds unnumber'd tho' the God be known,
"'Tis ours to trace him only in our own."

Natchez is a port of entry, and vessels of 300 or 400 tons burden come up the river to the city, meeting with no other difficulty than the strength of the current and head winds. It is in Lat. 31.° 33.′ N. long. 16.° 15.′ W. and is about 300 miles above New Orleans. It has a post office which receives and discharges the Mail regularly once a week.—It is said that a line of stages is soon to be established from Lexington to New Orleans for the purpose of carrying the United States' mail.

It is observed that the wool of the sheep in the Natchez district is more hairy and less valuable than it is in the middle States; but that the mutton is well tasted —It is also observed that domestick animals generally are less tame and docile, owing perhaps to their being more able to get their living in the woods and swamps throughout the year, than is afforded them in the middle and northern states; and to their feeling less dependent on man for protection and subsistence.

The tract of good upland in the Natchez district is not very extensive, being about 130 miles in length along the Mississippi river, and not more than 23 in

breadth. This tract is remarkably fertile, but the country being high, and much broken with hills, a few years washing will render the soil of the cultivated parts less productive.

The making of sugar from the cane does not succeed very well in the neighbourhood of Natchez; but from Point Coupee down to the Gulf of Mexico, it is manufactured to advantage and is the staple commodity of that part of the Mississippi—Sweet and sour lemons grow in great plenty on that part of the river.

The climate of Natchez is very changeable in winter, but the summers are regularly hot, being about 14° of permanent heat beyond that of Pennsylvania and new Jersey.

The accumulation of wealth being the grand polar star to which all the pursuits of the inhabitants are directed at present, the acquirements of taste and education perhaps are too much neglected in and about Natchez: But the valuable principle of hospitality generaliy prevails, especially among the rich planters; and it is this that affords true enjoyment and comfort to the stranger and traveller, and never fails to leave lively impressions of gratitude on the mind of him who thus finds a friend, where, from the peculiar situation of the country, he is or may be most needed.

Island No. 115, 6 *miles below Natchez*, Lies near the middle of the river, both sides are equally safe in a tolerable state of the water, the left being the nearest, in low water you must take the right passage—No. 115 is about 3 miles long, the river turns a little to the left.	6	765
St. Catharine's creek, 10 *miles below* 115, Enters in at a bend on the left shore.	13	778
Ellis's, or White Cliffs, 1 *mile below*, These cliffs are on the left bank of the river, which bends short to the right.	1	779
Islands Nos. 116 & 117, 7 *miles below*, The left of both is the best channel and the nearest, may go beween them in high water; 116 lies nearest the left shore and projects a	7	786

little above the head of 117; the river bends to the left; these islands are about three miles long.

(*See MAP* 11, *page* 216.)

Island No. 118, 14 *miles below* 116, 17 803

Lies in a bend on the right side, take the left passage at all times. No. 118 is about one mile long.

Homochitto river, 2 *miles below* 118, 3 806

Enters in on the left side, through a willow shore in a bend, it is a small river.

Buffaloe Creek, 6 *miles below Homochitto*, 6 812

This is a small creek, entering in on the left side.

Loftus' Heights, 2 *miles below Buffaloe*, 2 814

Are on the left bank, and on which is situated *Fort Adams.*

Here is a large eddy on the left side immediately above the fort; in order to land near the fort, you must run near the lower end of the eddy before you touch it, then pull in and it will carry you up to the landing place. Pinkneyville, a small village, lies about 7 miles eastward of Fort Adams.

Line of Demarkation, below the fort, 6 820

This line was agreed upon between Spain and the United States several years prior to the latter government taking possession of Louisiana as ceded to it by France —It crosses the river in 31 degrees N. latitude.

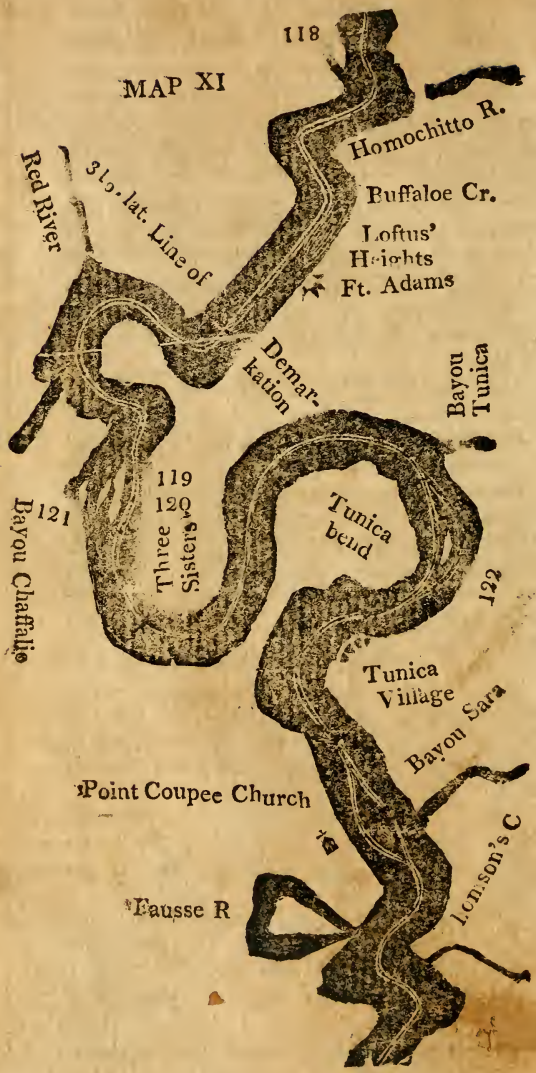
About one mile below the line is what is called the *great cut off*, which is only five miles across, and it is reckoned as the river runs fifty-four miles round.

Red river, 9 *miles below the line*, 9 829

This is a very considerable river entering in at a large bend on the right shore.*

Bayou Chaffalio, 3 *miles below Red river*, 3 832

*For a particular account of Red river, see Appendix.


118
MAP XI
Homochitto R.
Buffaloe Cr.
Loftus' Heights
Ft. Adams
31o. lat. Line of
Red River
Demar-kation
Bayou Tunica
119
120
121
Three Sisters
Bayou Chaffalio
Tunica bend
122
Tunica Village
Bayou Sara
Point Coupee Church
Fausse R
Lonson's C

Be careful that you keep pretty close to the left shore from Red river below this place, to avoid being drawn into this current, which runs out on the right shore with great rapidity. This is the first large body of water which leaves the Mississippi, and falls by a regular, and separate channel into the Gulf of Mexico. Notwithstanding the magnitude of this river, it is not navigable to the Gulf of Mexico, owing to an immense floating bridge, or raft across it, of many leagues in length, and so firm and compact in some places that cattle and horses are driven over it. This astonishing bridge is constantly augmented by the trees and rubbish which the Chaffalio draws out of the Mississippi, which it leaves in the westernmost part of that remarkable bend just below the boundary, and has every appearance of having been formerly a continuation of the Red river, when the Mississippi washed the high lands from Clarksville to the Bayou Tunica, (or Willings creek,) the traces of which are yet visible by the lakes through which a large current passes when the river is high. The distance on a straight line from Clarksville to the Bayou Tunica is not more than eight miles, but by the present course of the river, it is about fifty.

Three Sisters, Isls. Nos. 119, 120 *and* 121, 11 | 843

No. 119 is nearest the left shore, 120 lies to the right of it, and 121 still further to the right close in a bend on the right shore; channel past these is always on the left in low water, may go between 119 and 120 in high floods; the river here is straight for several miles, No. 119 is about three miles long.

Bayou Tunica, below the Three Sisters, 35 | 878

Is a small creek emptying in on the left side, on which are considerable settlements, cotton farms, &c.

Island No. 122, 6 *miles below Bayou Tunica.* 6 | 884

Lies in the middle of the river, may pass on either side.

Tunica Village, 4 *miles below* 122, 4 888

Is situated on the left bank of the river, which for about 30 miles above has been forming nearly a complete circle, and now comes within one mile and a half of the current where it runs nearly in an opposite direction. This is called the *Tunica Bend.*

Point Coupee Church, 12 900

Stands on the right bank, and opposite on the left side,

Bayou Sara empties in.

About 9 miles up this creek is a beautiful settlement, cotton grows here in great perfection; David Bradford, Esq. formerly of Pennsylvania, resided here.

A Sand Bar opposite Bayou Sara.

Pass on either side, it is not seen in high water.

Fausse Riviere, or Point Coupee, 5 905

This is the old bed of the river, and is something like the Tunica bend, but not so large; it was cut through a few years ago by some Canadian Traders, by which a distance of about twenty miles is saved; it is on the right side of the present channel. Here is a beautiful settlement called

Point Coupee Settlement.

Here commences the embankment or Levee on the right side of the river, and continues down to Orleans, and it is here where the beauty of the Mississippi and the delightful prospect of the country open to view. The banks of the river from below Point Coupee on the right, and from Baton Rouge on the left side down to the city of Orleans, have the appearance of one continued village of handsome and neatly built houses. They are frame buildings of one story high, and stand considerably elevated on piles or pickets from the ground, are well painted and nicely surrounded with orange

trees, whose fragrance add much delight to the scenery.

Thompson's Creek, left shore, 2 | 907

Up this creek also are some fine cotton plantations, the soil is remarkably rich and produces great crops.

Cliffs on the left bank, one mile long, 2 | 909

(See MAP 12 page 222)

Islands Nos. 123 *and* 124, 3 *miles below,* 4 | 913

Lie in the middle of the river, the one immediately below the other, channel good on either side. They are about five miles long. Thence a fine river to

Baton Rouge, 19 *miles below* 124, 24 | 937

Is on the left bank of the river. Here commences the high lands contiguous to the river, and are thirty or forty feet above its greatest rise. Here also is a fine settlement called

Baton Rouge Settlement.

The Levee on the left side of the river commences a little above this settlement.

Bayou Manchac, or Iberville, left shore, 15 | 952

Here the river turns short to the right. During the high waters the Bayou leaves the Mississippi in a considerable stream, and after passing the river Amitee falls into lake Maurepas, thence into lake Pontchartrain, and communicates with the Gulf of Mexico near the mouth of Pearl or Half-way river.* This channel which is at present much choked up may yet become the principal communication

* To give the reader an idea of the fertility of the soil and luxuriance of the productions of an island near the mouth of this river, it may not be amiss to give him the words of the celebrated American traveller and botanist, Mr. William Bartram, in his book of travels through North and South Carolina, Georgia, East and West Florida, in the years 1773 to 1778.

"The island is six or seven miles in length, and four or five in width, including the salt marshes and plains, which invest it on every side, I believe we may only except a narrow strand at the south end of it, washed by lake Borgone at the Regullets, which is a promontory composed of banks of sea-shells and sand, cast up by the force of winds, and the surf of the lake: these shells are chiefly a small species of white clam shells, called les

to the coast of West Florida, which will be a much cheaper route of conveyance than by New Orleans. The island formed by this channel, and on which New Orleans stands, may be considered the Delta of the Mississippi.

coquelles. Here are a few shrubs growing on these shelly heights, viz Rhamnus frangula, Sideroxilon, Myrica, Zanthoxilon clava Herculis, Juniperus Americana, Lysium salsum ; together with several new genera and species of the herbacious and suffruticose tribes, Croton, Sillingia, &c. bu particularly a species of Mimosa (Mimosa virgatia) which in respect of the elegancy of its pinnated leaves cannot be exceeded by any of that celebrated family. It is a perennial plant, sending up many nearly erect stems, from the root or source, these divide themselves into many ascendant slender rods like branches, which are ornamented with double pinnated leaves, of a most delicate formation. The compound flowers, are of a pale greenish yellow, collected together in a small oblong head, upon a long slender peduncle, the legumers are large, lunated and flat, placed in a spiral or contorted manner, each containing several hard compressed seed, or little beans.

The interior and by far the greatest part of the island consists of high land ; the soil to appearance a heap of sea sand in some places, with an admixture of sea shells, this soil, notwithstanding its sandy and steril appearance, when divested of its natural vegetative attire, has, from what cause I know not, a continual resource of fertility within itself, the surface of the earth, after being cleared of its original vegetable productions, exposed a few seasons to the sun, winds and triturations of agriculture, appears scarcely any thing but heaps of white sand, yet it produces Corn (Zea) Indigo, Batatas, Beans, Peas, Cotton, Tobacco, and almost every sort of esculent vegetable, in a degree of luxuriancy very surprising and unexpected, year after year, incessantly, without any addition of artificial manure or compost ; there is indeed a foundation of strong adhesive clay, consisting of stratas of various colours, which I discovered by examining a well, lately dug in Mr. Rumsey's yard ; but its lying at a great depth under the surface, the roots of small shrubs and herbage, cannot reach near to it, or receive any benefit, unless we may suppose, that ascending fumes or exhalations, from this bed of clay, may have a vivifick nutritrive quality, and be received by the fibres of the roots, or being condensed in the atmosphere by nocturnal chills, fall with dews upon the leaves and twigs of these plants, and there absorded, become nutritive or exhilerating to them.

Besides the native forest trees and shrubs already noted, manured fruit trees arrive in this island to the utmost degree of perfection, as Pears, Peaches, Figs, Grape Vines, Plumbs &c. of the last mentioned genus, there is a native species grows in this island, which produce their large oblong crimson fruit in prodigious abundance ; the fruit though of a most enticing appearance, are rather too tart, yet are agreeable eating, at sultry

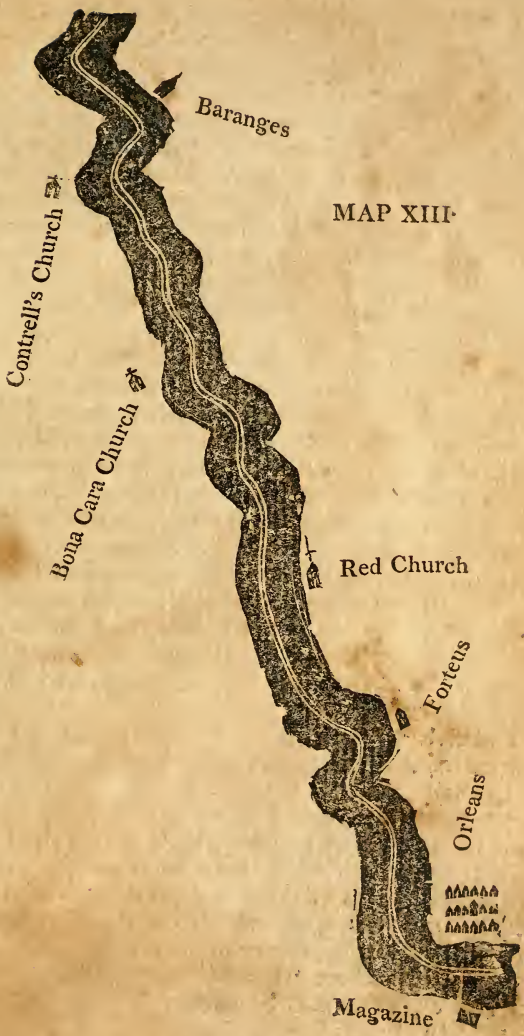
Bayou Placquemine, or outlet, right side,	8	960
Here the river winds short to the left, and from thence to N. Orleans its general course is pretty near that of S. E. From this Bayou there is a water communication with the Opelousas,		
Manchac Church, left bank,	10	970
Bayley's, a noted cotton planter, right side,	4	974
Island No. 126, *7 miles below Bayley's*	7	981
Lies nearest the right shore, channel left side, it is about one mile and a half long.		
Bayou la Fourche, (or the Fork) right side,	10	991
From the Mississippi along this Bayou to the sea coast the settlement is compact.		
La Fourche Church, right bank,	1	992
Arnold's, a sugar planter, right bank,	4	996
(See MAP 13, *page* 223.*)*		
Baranges a sugar planter, left side,	5	1001
This seat is said to be the handsomest on the river.		
Contrell's Church, right bank,	5	1006
Bona Cara Church, right bank,	18	1024
Red Church, left bank,	18	1042
Forteus's, a sugar planter, left bank,	15	1057
Orange Grove, left bank,	12	1069
NEW-ORLEANS,*	4	1072

* For a description of New Orleans, see Appendix.

noon, in this burning climate, they afford a most delicious and reviving marmalade, when preserved in sugar, and make excellent tarts: the tree grows about twelve feet high, the top spreading, the branches spiny and the leaves broad, nervous, serrated, and terminate with a subulated point."

As an instance of the salubrity of the atmosphere on this island, Mr. Bartram observes, "The French gentleman (proprietor of the planta ion) was near eighty years old, his hair almost white with age, yet he appeared active, strong and muscular, and his mother who was present, was one hundred and five years old, active and cheerful, her eyes seemed as brisk and sparkling as youth, but of a diminutive size, not half the stature and weight of her son; it was now above fifty years since she came into America from old France.

123
124
MAP XII.
Batton Rouge
Bayou Placquemine
Bayou Manchac
Manchac Church
Bayleys
125
Bayou Fourche
Arnolds


Baranges
MAP XIII.
Contrell's Church
Bona Cara Church
Red Church
Forteus
Orleans
Magazine

THE navigator having now arrived after an irksome passage of between five and six weeks, (about the time it takes to descend from Pittsburgh) at the grand mart of business, the Alexandria of America, he leaps upon shore with ecstacy, securing his boat to the bank with a careful tie, mounts the Levee, and with elated heart and joyful countenance, receives the warm and friendly hand of a fellow citizen, in whose integrity he confides, and to whom in confidence he can dispose of his cargo.—What a reverse in the situation of a trader, since the banks of the Mississippi have become the soil of the United States—since a governour of a republican people has been happily placed in the chair of not only one but many tyrants—since in fact he trafficks with those to whom he looks up as friends, instead of those whose every glance was dire jealousy and suspicion—whose demeanor, bombastick pride and ostentation; whose pursuit and plan in trade was one continued system of bribery, fraud, and chicanery, from the first authority in the old to the last in this their foreign government.—What a reverse in the situation of you, western Americans! What a conquest gained! a conquest equal to a second revolution! a vast and almost unlimited territory acquired without the loss of a drop of blood! Happy Columbians! prosperity smiles, must smile, on all governments equally mild, and equally just with yours!

The river opposite New Orleans is about one mile and a half in breadth, and notwithstanding the apparent velocity of the current and the distance to the sea, it "perceptibly ebbs and flows as high up as the city from 12 to 18 inches perpendicular."* It is about 108 miles to the mouth of the river from the city; to the English Bend it is 17 miles, to Fort Placquemines 48, thence to the *Passes*, where the river branches out into three parts, 24 miles, thence to the mouths of the river 19 miles. And here "the Mississippi discharges itself into a sea that may be compared to the Mediter-

* MS. Journal of Col. George Morgan.

ranean, bounded on the north and south by the continents of Europe and Africa, as the Mexican sea is by the two Americas."

In a much admired and justly celebrated work,† the author of which speaking of the convulsions which many parts of the country which he describes must have undergone in various periods of time, observes with respect to the Gulf of Mexico, "While ruminating on these subjects, I have often been hurried away by fancy, and led to imagine, that what is now the bay of Mexico, was once a champaign country; and that from the point or cape of Florida, there was a continued range of mountains through Cuba, Hispaniola, Porto Rico, Martinique, Guadaloupe, Barbadoes, and Trinidad, till it reached the coast of America, and formed the shores which bounded the ocean, and guarded the country behind; that by some convulsion or shock of nature, the sea had broken through these mounds, and deluged that vast plain, till it reached the foot of the Andes; that being there heaped up by the trade winds, always blowing from one quarter, it had found its way back, as it continues to do, through the gulf, between Florida and Cuba, carrying with it, the loam and sand it may have scooped from the country it had occupied, part of which it may have deposited on the shores of North America, and with part formed the banks of Newfoundland. But, says our author, these are only the visions of fancy."

† Jefferson's Notes on Virginia.

APPENDIX.

A BRIEF NOTICE OF THE SPRINGS, MINES, CURIOSITIES, &c. ON THE WESTERN WATERS, AND SOME OF THOSE OF LOUISIANA.

A CELEBRATED author* in his observations on our western waters, has suggested an idea, that "the whole scope of country from above a range of mountains which cross the Ohio somewhere below the falls, as high up as Pittsburgh and bordering lake Erie, was once overwhelmed with water, forming an immense lake. That the summit of those hills was sufficiently high to do this, and that by some great convulsion of nature, this barrier was rent to its base, and the waters being thus let loose, the lake above was drained, and the floods centering from all parts of the higher to the lower grounds, formed the bed of the river now called Ohio."

This great revolution of waters, our author thinks, changed the face of the country, and filled our hills with vast bodies of logs, drift-wood, leaves, &c. which through time have formed those veins of fine stone-coal, of which we reap the benefit daily. As a corroboration of this idea of Mr. Volney, there is frequently found in our coal small pieces resembling exactly the grain of the wood, and the bark of a tree; and it retains this appearance even after it has gone through the fire and reduced to cinder. Red pieces of cinder are also frequently discovered, resembling *crocos*, and

* Volney's View of America.

which answers our silversmiths for the same purposes as does that substance. It also answers instead of emery, for sharpening knives, razors, &c. if it be well pounded, sifted, and mixed with sweet-oil.

Near Georgetown, about 38 miles below Pittsburgh, on the Ohio, a mine of gold has lately been discovered, a specimen of which having been tried by a silversmith in Pittsburgh, who declared it to be *pure virgin gold*, and without any alloy. The lump produced had the appearance of having been found in a running water.

A clay well calculated for the manufacture of delph-ware, smoking-pipes, &c. has lately been discovered near Pittsburgh. In a creek emptying into the Allegheny a small distance above Pittsburgh, is found a stone which answers every purpose of the oil-stone made use of by carpenters, joiners, &c. On the side of the hill to the east of the Allegheny river, about two miles above Pittsburgh is a *spring*, the waters of which have performed cures for the cholera morbis. It also cures the inflammatory sore eyes. It is called the *Allum Spring*, tasting strongly of that mineral.

On the Great Kenhawa, opposite the mouth of Cripple creek, Montgomery county, Va. are mines of lead; the metal of which is accompanied with a portion of silver, too small however to be worth the trouble of separation. The portion yielded is from 50 to 80lb. pure metal from 100lb. of washed ore. On the opposite side of the river, one mile from the ore bank, is a furnace which works about 25 tons of lead a year.

Valuable lead mines are said to abound in Cumberland, below the mouth of Red river. And in a hill between Cumberland and Tennessee rivers, is a bank of *white earth* of great extent, supposed to be good for making a fine kind of earthen ware, and a short distance from it is a bank of *red clay*, which is mixed with water and made use of for painting.

On Rock river, which empties into the Mississippi, very valuable lead mines abound, and which are said to be the most extensive on the western waters—these are very little worked.

About 60 miles N. W. of Pittsburgh, and not far from the line between the states of Ohio and Pennsylvania, is a salt spring, the water of which being weak, very little attention is paid to it as yet. There are considerable salt-works carried on within about 30 miles of Chillicothe, likewise a bank of fine yellow ochre near that place, Ohio state.

Large salt springs abound at the Blue Lick, Big Bone, Bullet's Lick, and on the north fork of Holstein; the waters of these springs yield from one to one bushel and a half of salt from 1000 gallons of water, being about 80lb. of water to 1lb. of salt; but of sea water 25lbs. yield 1lb. of salt. On the Youghiogheny at Turkey-foot is a salt spring; the river however overflows it except in very low water; this spring is not worked.

Mr. Jefferson in his Notes observes that "In the low grounds of the Great Kenhawa, 7 miles above the mouth of Elk river, and 67 above that of Kenhawa itself, is a hole in the earth of the capacity of 30 or 40 gallons, from which issues constantly bituminous vapour, in so strong a current as to give to the sand about its orifice the motion which it has in a boiling spring. On presenting a lighted candle or torch within 18 inches of the hole, it flames up in a column of 18 inches in diameter, and 4 or 5 feet in height, which sometimes burns out in 20 minutes, and at other times has been known to continue 3 days, and then has been left still burning. The flame is unsteady, of the density of that of burning spirits, and smells like burning pit coal. Water sometimes collects in the bason, which is remarkably cold, and is kept in ebullition by the vapour issuing through it. If the vapour be fired in that state, the water soon becomes so warm that the hand cannot bear it, and evaporates wholly in a short time.

"A similar one to this is on Sandy river, the flame of which is a column of about 12 inches in diameter, and three feet high."

Iron mines are said to have been found between the Muskingum and the Ohio, others in Kentucky, between the Cumberland and Barren rivers, between

Cumberland and Tennessee, on Reedy creek, near the Long Island, and on Chesnut creek, a branch of the Great Kenhawa.

On the Yough and its branches, are very valuable iron ore banks, and on Big Beaver creek mines of ore have been discovered.

What is called the Iron Banks on the Mississippi are said by competent judges to have no ore in them.—And indeed what is as yet known of that country, it seems to want iron, though rich in other mines, of lead especially.

THE following description of the Hot Springs and Volcanic appearances in the country adjoining the river Ouachitta, in Louisiana, is extracted from the New York "Medical Repository." vol. 9. p. 47.

"DURING the summer of 1804, several persons residents of the Mississippi Territory, visited the hot springs, and traversed the country of the Ouachitta;—some from motives of curiosity, others on account of their health: Among the latter was Major E. a gentleman of the first respectability in this territory. To him I am indebted for the greater part of the information contained in the following observations.

"The Ouachitta is a river of Louisiana; it empties into the Red River, thirty miles from the junction of the Red River and the Mississippi, near the line of demarkation. The Ouachitta runs nearly a south-south-east course, and can be ascended in boats a distance of 600 miles, to where it forks. The hot springs are 100 miles below the forks, situated between the 34th and 35th degree of north latitude, on a creek that falls into the river, and are about ten miles distant from it.

"The lands on the Ouachitta, especially in the neighbourhood of the hot springs, are high, poor, broken, and stony. This is the state of the Ouachitta lands generally, except near its mouth, where, for a short distance on each side, the lands are low, level, and fertile, but for the most part subject to be overflown.

"The timber on the high lands consists of pine, black-jack, and mountain oak. Silex, or flint, with its various combinations, often in the form of granite, is the stone most commonly met with. Schistus, or slate, exists likewise in considerable quantities. Fine specimens of rock-chrystal from that place have been presented to me: the form is of an hexahedral prism, terminated by pyramids of an equal number of sides.

"I have received a number of specimens of the minerals of the country. They were supposed, from their yellow and white metallic appearance, to contain the precious metals. But after a careful analysis, I could not discover any portion of gold or silver. They were composed principally of the following ores: Antimony, mineralized by sulphur, of a bluish grey metallic appearance, with a radiated chrystalization, composed of slender hexahedral prisms, zinc, mineralized by sulphur, forming the ore called blende:—feldspar, of a white, inclining to a red colour, granulated texture, the surface covered with chrystal, of a rectangular form, and very brilliant; black schorl, with pieces of quartz intermixed.

"Volcanic productions are common. The face of the country bears strong marks of fire. A rapid decomposition of mineral bodies below the surface still appears to go on. Major E. during his stay last summer at the springs, witnessed a great explosion of one of the mountains in the vicinity, attended with the sensation of an earthquake. An immense column of flame and smoke was seen to ascend a great distance: one of his hunters was near the place at the time. He visited the mountain the day after the eruption, and observed lava still flowing in the fissure caused by the explosion.

"The hot springs are considerable in point of number. They arise from the side of a hill, at the distance of a quarter of a mile from the creek. Major E. supposed the heat during the dry season to be at the boiling point. Meat was boiled in them in a shorter space of time than could be accomplished by a culinary fire;—

they were made use of to prepare both tea and coffee: The temperature of these springs is influenced by the season. During the months of June and July, 1804, it was very dry, no rain fell during that time. The waters were diminished in quantity, and the degree of heat was so great, that persons could not expose themselves to the vapour, which is the usual mode adopted by those who visit them on account of their health.

"These hot springs have been, for some time, much celebrated by people settled in their neighbourhood, on the Mississippi and its branches, for their efficacy in curing or relieving chronic pains, paralytic affections, and inability to motion generally. The Indians have, time immemorial, resorted to them on account of their medicinal virtues. The ground around them is called by the aborigines, *the land of peace*. Hostile tribes, while here, remain at harmony with each other.

"Many of the white hunters, who are very liable to disease from exposure to the vicissitudes of climate and season, have been restored by the use of these springs, from a state of entire inability of motion, to complete health and activity.

"The water of the hot springs is soft and limpid, without smell. The taste is agreeable. It is drunk after it becomes cool, and used for every other purpose in preference to the water of the cold springs in the vicinity.

"I received a quantity of it bottled and sealed. After a careful analysis, by evaporation and precipitation, I found that it contained less mineral impregnation than water usually does. Litmus paper, lime water, the nitrate of silver, the oxalic acid, alcohol of galls, and the prussiate of lime, indicated the presence of a small portion of carbonic acid, some of the muriate of soda, a small quantity of calcareous matter, and a scarcely perceptible portion of iron. Muriate of barytes, spirits of ammoniac, caustic pot-ash, acetate of lead, nitrate of mercury, the sulphuric and muriatic acids, with many other re-agents commonly used to detect minerals, produced no effect.

"As hot waters are usually impregnated with mine-

rals, their heat has been accounted for by their coming in contact with pyritous substances. But the water of these springs, notwithstanding its great heat, would appear from this analysis, to be purer than spring water generally; we, therefore, cannot account for the heat, by contact with mineral bodies in a state of decomposition. These springs are similar in this respect to the water of the spring of Geyser, in Iceland, the temperature of which is 212 degrees, the boiling point; yet the celebrated Dr. Black, who analyzed the water, found it to be pure. From whence then does the heat of these springs arise, which, during a dry season are at the boiling point, and next to those of Iceland, are the hottest known? It is probable that a rapid decomposition of mineral bodies exists below the strata over which the water of these springs flows. The volcanic appearance of the country strengthens the supposition. The caloric, evolved by the decomposing minerals, may permeate the subjacent strata, and be received by the water.

"The great relief experienced by persons who have visited these springs, the healthfulness of the climate, and the security derived from the American government, will render them in time, a valuable acquisition to our citizens on the Mississippi and its branches."

"At about 300 miles from the village of the Great Osages, in a westerly direction, after having crossed several streams of the Arkansas, the traveller comes to a low bottom, surrounded by hills of a vast extent.—This valley is about 15 leagues across. The soil is a black sand, very fine, and so hard that horses scarcely leave any tracks on it. During the hot and dry season, vapours rise from this bottom, which condense and fall back upon the black sand, covering it with a layer of exceedingly white and fine salt about half an inch thick. The rains wash away this accumulation. At about 18 miles from this bottom, he meets with mines of sal gem on the very surface of the earth. The Indians, who are perfectly acquainted with it, are obliged to make use of levers to break it up, and loosen it. At

about 15 leagues distance from the last mentioned place, to the south, there is a second mine of sal gem, of the same nature with the first. They only differ in colour; the former being white, and the other of a reddish hue. Further south, and still upon the streams of the Arkansas, there is a saline, which may be considered as one of the most interesting phenomena of nature.

"On the declivity of a small hill, there are five holes about a foot and an half in diameter, and two feet deep. They are always full of a very salt water, but never run over. Dip out as much as you please, there is no apparent diminution; the deficiency is instantly supplied: and about ten feet lower down the hill there issues a spring of pure and fresh water.—When these regions become peopled, the transportation of this rock-salt will be perfectly easy, by means of the Arkansas. Experience has proved it to be preferable to every other kind in curing provisions.

"If these remarks, made without order, but with a scrupulous regard to truth, should excite the curiosity of gentlemen who possess talents, and are capable of going to the bottom of matters which I have but superficially touched, I cannot doubt that incalculable advantages will result from them, both to the United States and to the territory of Louisiana."

N. Y. Medical Repos.

AN ACCOUNT OF LOUISIANA,

DISCOVERY, SETTLEMENT AND TRANSFER.

THE country east and west of the Mississippi was called *Florida* by Sebastian Cabot, who visited that part of the continent by order of Henry VII. of England, about the year 1497.

John Pontio de Leon, a Spaniard, arrived on the coast, anno 1512, attempted a settlement, and erected a small fort. The subjects of Charles X. of France, seem to have made several attempts to settle this coun-

try but were still defeated by the Spaniards, until the year 1684, when Mons. De la Sale discovered the mouth of the Mississippi, and built on the bay a fort, which he called "Fort Lewis."—The founder having been assassinated, the fort was abandoned until anno 1698, when captain Iberville penetrated up the Mississippi, and having planted a few settlers, called the country *Louisiana*. Until this time the Spaniards had a few forts on the coast, of which Pensa Cola seems to have been the principal, which is 14 leagues east of the isle of Dauphin. About the year 1720, Mons. La Sueur sailed up the St. Lewis river or Mississippi above 760 leagues from its mouth, and he observes that the river is known to flow still further up.

From this time it remained in the hands of France, whose monarchs made several grants of its trade, in particular to Mr. Crosat in 1712, and some years afterwards, with his acquiescence, to the well known company projected by Mr. Law, and which was relinquished in 1731. By a secret convention on the 3d November, 1762, the French government ceded so much of the province as lies beyond the Mississippi, as well as the island of New Orleans, to Spain, and by the treaty of peace, which followed in 1763, the whole territory of France and Spain, eastward of the middle of the Mississippi to the Iberville, thence through the middle of that river, and the lakes of Maurepas and Ponchartrain to the sea, was ceded to Great Britain. Spain having conquered the Floridas from Great Britain, during our revolutionary war, they were confirmed to her by the treaty of peace of 1783. By the treaty of St. Ildefonso, of the 1st of Oct. 1800, his Catholick majesty promises and engages on his part to cede back to the French Republick, six months after the full and entire execution of the conditions and stipulations therein contained, relative to the duke of Parma, "the colony or province of Louisiana, with the same extent that it actually has in the hands of Spain, that it had when France possessed it, and such as it ought to be after the treaties subsequently entered into between Spain

and other states." This treaty was confirmed and enforced by that of Madrid, of the 21st of March, 1801. From France it passed to us by the treaty of the 30th of April, 1803, and was taken regular possession of by our government on the 20th of December following.

BOUNDARIES.

The precise boundaries of Louisiana, westwardly of the Mississippi, though very extensive, are at present involved in some obscurity, data are equally wanting to assign with precision its northern extent. From the source of the Mississippi, it is bounded eastwardly by the middle of the channel of that river to the 31st degree of latitude: thence, it is asserted upon very strong grounds, that according to its limits, when formerly possessed by France, it stretches to the east, as far, at least, as the river Perdido, which runs into the bay of Mexico, eastward of the river Mobile.

DIVISIONS.

This province as held by Spain, including a part of West Florida, was laid off into the following principal divisions: Mobile, from Balise to the city, New Orleans and the country on both sides of lake Ponchartrain, first and second German coasts, Catahanose, Fourche, Venezuela, Iberville, Galvez-town, Baton-Rouge, Pointe Coupee, Atacapas, Opelousas, Ouachita, Avoyelles, Rapide, Natchitoches, Arkansas, and the Illinois.

In the Illinois there were commandants, at New Madrid, St. Genevieve, New Bourbon, St. Charles and St. Andrews, all of which were subordinate to the commandant general.

Baton-Rouge having been made a government, subsequently to the treaty of limits, &c. with Spain, the posts of Manchac and Thompson's creek, or Feliciana, were added to it.—Chapitoulas was sometimes regarded as a separate command, but was afterwards included within the jurisdiction of the city. The lower part of the river had likewise occasionally a separate commandant.

Many of the present establishments are separated

from each other by immense and trackless deserts, having had no communication with each other by land, except now and then a solitary instance of its having been attempted by hunters, who had to swim rivers, expose themselves to the inclemency of the weather, and carry their provisions on their backs, for a time proportioned to the length of their journey. This was particularly the case on the west of the Mississippi, where the communication was kept up only by water, between the capital and the distant settlements; three months having been required to convey intelligence from one to the other, by the Mississippi. The usual distance accomplished by a boat in ascending, is five leagues per day. The rapidity of the current in the spring season especially when the waters of all the rivers are high, facilitates the descent, so that the same voyage by water, which requires three or four months to perform from the capital, may be made to it in from 12 to 16 days. The principal settlements in Louisiana are on the Mississippi, which begins to be cultivated about 20 leagues from the sea, where the plantations are yet thin, and owned by the poorest people. Ascending, you see them improve on each side, till you reach the city, which is situated on the east bank, on a bend of the river, 35 leagues from the sea.

Chapitoulas, first and second German coasts.—Catahanose—Fourche, and Iberville.

The best and most improved are above the city, and comprehend, what is there known by the Paroisse de Chapitoulas, Premier and Second Cote des Allemands, and extend sixteen leagues.

Above this begins the parish of Catahanose, or first Acadian settlement extending eight leagues on the river. Adjoining it and still ascending is the second Acadian settlement or parish of the Fourche, which extends about six leagues. The parish of Iberville then commences and is bounded on the east side by the river of the same name, which though dry a great part of the year, yet, when the Mississippi is raised, it communicates with the lakes Maurepas and Ponchartrain,

and through them with the sea, and thus forms what is called the island of New Orleans. Except on the point just below the Iberville, the country from New Orleans is settled the whole way along the river, and presents a scene of uninterrupted plantations in sight of each other, whose fronts to the Mississippi are all cleared, and occupy on that river from 5 to 25 acres with a depth of 40; so that a plantation of 5 acres in front contains 200. A few sugar plantations are formed in the parish of Catahanose, but the remainder is devoted to cotton and provisions, and the whole is an excellent soil incapable of being exhausted. The plantations are but one deep on the island of New Orleans, and on the opposite side of the river as far as the mouth of the Iberville, which is 35 leagues above New Orleans.

Bayou de la Fourche—Atacapas, and Opelousas.

About twenty five leagues from the last mentioned place on the west side of the Mississippi, the creek or bayou of the Fourche, called in old maps La Riviere des Chitamaches, flows from the Mississippi, and communicates with the sea to the west of the Balise. The entrance of the Mississippi, is navigable only at high water, but will then admit of craft of from 60 to 70 tons burthen. On both banks of this creek are settlements, one plantation deep, for near fifteen leagues, and they are divided into two parishes. The settlers are numerous, though poor, and the culture is universally cotton. On all creeks making from the Mississippi, the soil is the same as on the bank of the river, and the border is the highest part of it, from whence it descends gradually to the swamp. In no place on the low lands is there depth more than suffices for one plantation, before you come to the low grounds incapable of cultivation.—This creek affords one of the communications to the two populous and rich settlements of Atacapas and Opelousas formed on and near the small rivers Teche and Vermillion which flow into the bay of Mexico. But the principal and swiftest communication is by the bayou or creek of Placquemines, whose en-

trance into the Mississippi is seven leagues higher up on the same side, and thirty two above New-Orleans. These settlements abound in cattle and horses, have a large quantity of good land in their vicinity, and may be made of great importance. A part of their produce is sent by sea to New Orleans, but the greater part is carried in batteaux by the creeks above mentioned.

Baton Rouge and its Dependencies.

Immediately above the Iberville, on both sides of the Mississippi lies the parish of Manchac, which extends four leagues on the river, and is well cultivated. Above it commences the settlement of Baton Rouge, extending about 9 leagues. It is remarkable as being the first place, where the highland is contiguous to the river, and here it forms a bluff from thirty to forty feet above the greatest rise of the river. Here the settlements extend a considerable way back on the east side; and this parish has that of Thomson's creek and Bayou Sara subordinate to it. The mouth of the first of these creeks is about forty nine leagues from New Orleans, and that of the latter two or three leagues higher up. They run from the north east to the south west, and their head waters are north of the 31st degree of latitude. Their banks have the best soil, and the greatest number of good cotton plantations of any part of Louisiana, and are allowed to be the garden of it.

Pointe Coupee, and Fausse Riviere.

Above Baton Rouge, at the distance of fifty leagues from New Orleans, and on the west side of the Mississippi is Pointe Coupee, a populous and rich settlement extending 8 leagues along the river. Its produce is cotton. Behind it, on an old bed of the river, now a lake, whose outlets are closed up, is the settlement of Fausse Riviere, which is well cultivated.

In the space now described from the sea as high as and including the last mentioned settlement, is contained three-fourths of the population, and seven-eighths of the riches of Louisiana.

From the settlement of Pointe Coupee on the Mississippi to Cape Girardeau above the mouth of the Ohio, there is no land on the west side, that is not overflowed in the spring to the distance of eight or ten leagues from the river with from two to twelve feet water, except a small spot near New-Madrid; so that in the whole extent there is no possibility of forming a considerable settlement contiguous to the river on that side. The eastern bank has in this respect a decided advantage over the western, as there are on it many situations which effectually command the river.

Red River and its Settlements.

On the west side of the Mississippi, seventy leagues from New Orleans, is the mouth of the Red river, on whose banks and vicinity are the settlements of Rapide, Avoyelles, and Natchitoches, all of them thriving and populous. The latter is situate seventy five leagues up the Red river. On the north side of the Red river a few leagues from its junction with the Mississippi is the Black river, on one of whose branches, a considerable way up, is the infant setlement of Ouachita, which from the richness of the soil may be made a place of importance. Cotton is the chief produce of these settlements, but they have likewise a considerable Indian trade. The river Rouge, or Red river is used to communicate with the frontiers of New-Mexico.

Account of a journey up the Washita (or Ouachita) River, in Louisiana, performed by William Dunbar, Esq. and Dr. Hunter.—Extract from the N. York Medical Repository.

THESE gentlemen were employed by Mr. Jefferson, President of the United States, pursuant to a provision of Congress for exploring Louisiana, as related at large in our Hex. ii. vol. i. p. 407. They set out from St. Catharine's landing, on the Mississippi, on the 16th of October, 1804, and proceeded to the mouth of the *Red river*. This is so called from the reddish appearance of the water, caused by some earthy impregnation tinged probably with iron. At a little

more than twenty-three miles from the Mississippi they entered the *Black river*, so called from the clearness of its water, looking dark when contrasted with the muddy hue of the *Red river*. They proceeded slowly upwards, passing the place where the river Tensa enters from the east, and the Catahoola from the west, and visiting the station called Fort Miro, about two hundred miles from the entrance below, and which is the out post of the United States in that quarter. As far up as the junction of the three rivers just mentioned, the country is alluvial and flat, the water sluggish, and the current scarcely perceptible. Immediately above, the high land and permanent strata of soil begin. The latitude of Fort Miro is about 30° 30′. After visiting various settlements, and encountering many difficulties, amidst shoals and rapids in the upper country, they arrived at length at the Hot-Springs, situated towards the source of the river, in latitude 34° 31′.

In prosecuting this expedition, it was discovered that frequent salines or salt-licks existed there. They learned that in the surrounding country, and in the spaces lying far towards the north and west, the rivers Washita, Arkansa, and the Red river, were too brackish to be potable in dry seasons. Salt springs, and plains incrusted with salt are reported to be interspersed through those regions. On the Washita they saw swans and alligators. About the latitude 33°, the line of demarkation between Orleans and Louisiana, the long moss or tillandsia almost suddenly ceases, being found no further to the northward; and about the same place the osiers, which grow on the banks of the river, cease, and show themselves further on to the southward.

The party proceeded no further than the Hot-Springs. These are six in number. They are situated about six miles from the main stream to the northwest, as it there runs, and a little above the great rapids. Their heat is too great for the hand to bear; the highest temperature is about 150°. The water,

on cooling, is palatable, and very good to drink, having but little foreign impregnation. The body of the mountain from which it issues is silicious, partly flint and partly free-stone; but the superficial parts, which have been overflowed by the effusions from the springs, are incrusted with a stratum of calcareous matter, that, in the course of time, has been deposited from their water. A trifling portion of iron is contained in it too, and precipitated with the lime. In the hot water of these springs a green plant vegetated, which seemed to be a species of the *conferva* growing in such situations; probably the *fontinalis*. But what is more remarkable, a bivalue testaceous animal adhered to the plant, and lived in such a high temperature too. Here they discovered a kind of wild cabbage, which they cooked, and found to be mild and good for food. Between the Hot-Springs and the place where the voyagers landed, are several licks and oozings of salt-water. They relate their surprise at beholding plants, shrubs, and trees at the outlet of the springs, absolutely growing and appearing healthy, while their roots were exposed to a heat of 130°.

The coldness of the weather was very remarkable. On the 30th of Dec. the quicksilver sunk to 9°; on the 2d of Jan. 1805, to 6°. On this latter occasion, when the temperature of the atmosphere was 6°, and of the river water 32°, a condensed vapour floated over its surface, as is usual in such cases. On January 11th the mercury in the air was at 11°, and in the Washita water at 39°. On the 12th the atmosphere was at 20°, and the river at 40°. In those cases of unequal temperatures much watery vapour hovered over the stream. The observers relate, that although 20° of difference are more than enough to make this exhalation appear visible, yet that 13° of variation are not enough for the purpose. Approximating thereby to Dr. Mitchell's experiments made at New-York in December, 1801, and published in Med. Rep. Hexade i. vol. iv. p. 309.

Above the alluvial country, the rocks were chiefly of a sort of shistus, some of it aluminous, and all of it

unfit for covering houses; a kind of silicious composition, resembling oil-stone, or turkey-stone, but too brittle for gun-flints; and a sort of sandy aggregate, which seemed as if it might be employed for grind-stones. The mineralized and carbonated wood was found in several places. There were no certain indications of the proper fossil coal: nor did they meet with any strata of gypsum. And, notwithstanding the heat of the springs, they met with no lava, pumice, or other volcanick matter.

Having in the course of the voyage, collected in addition to what has been related, considerable information about the Caddaux, the Osages, and the other nations of Indians which sometimes frequent the Washita and the *little* Missouri, which runs into it; having acquired a good deal of knowledge about the immense prairies, which are compared to Paradises, lying towards the sources of the Red river and the Arkansas, and having made many astronomical, geological, and meteorological observations from day to day, the adventurers, with their crew of soldiers, got back to Natchez near the end of January, 1805.

From the journal of survey which they kept with all possible correctness, a map of the Washita has been compiled at Washington, by Mr. Nicholas King, and engraved in Philadelphia, by Mr. William Kneass. This is a substantial addition to American geography.

This country was colonized early by the French. They projected and began extensive settlements on the Washita; but the general massacre planned and executed in part by the Indians against the French, and the consequent massacre of the Natchez tribe by the French, put an end to these undertakings, and they were never resumed under the French government.

"The *prairies* of this region are described as plains or savannas, without timber, generally very fertile, producing an exuberance of strong, thick, and coarse herbage. When a piece of ground is once got into this state in an Indian country, it can have no opportunity of, reproducing timber; it being an invariable

rule to fire the dry grass in the fall or winter, to obtain the advantage of attracting game when the young tender grass begins to spring. Thus the young timber is destroyed; and annually the *prairie* encroaches upon the woodland. It is probable that the immense plains known to exist in America may owe their origin to this practice. The plains of the Washita lie chiefly on the east side, and being generally formed like those of the Mississippi, sloping from the banks of the river towards the great river, they are more or less liable to the influence of inundation in the rear. This has been known to advance so far in certain great floods, as to be ready to pour over the margin into the Washita. Such an occurrence has however latterly become very rare, and it may be generally estimated that from one-fourth of a mile to a whole mile in depth, will remain exempt from inundation during the high floods."

Fishes are not very plentiful in the Washita. In the year 1799, the waters of the Mississippi, during an inundation, dammed up the Washita by regurgitation, to such a degree, that they swelled considerably above Fort Miro. The stagnation and corruption of the water from this cause, destroyed all the fishes in that part of the river; and they have been more scarce ever since. The bois d'arc (bow-wood), or yellow dye wood, is sometimes seen near the Washita. It bears a gold-coloured fruit as large as the egg of the ostrich; its deep green foliage resembles that of the orange-tree; and no forest-tree can compare with it for ornamental grandeur.

About three hundred miles above Nachitoches on the Red river, the navigation is opposed by a very serious obstacle. This is the raft, or natural covering which conceals the whole river for about seventeen leagues, and is continually augmenting by the drift-wood brought down with every considerable freshet. This bridge, which was for a time nothing but floating trees, &c. supports at this time a growth of every thing growing in the neighbouring forest, not excepting trees of a considerable size. And the river may

be frequently passed without any knowledge of its existence, so perfectly is it concealed by the superincumbent mass of materials. It is reported that the water is working for itself a new passage through the neighbouring low grounds.

Concord—Arkansas—St. Charles—St. Andrew, &c.

There is no other settlement on the Mississippi except the small one called Concord, opposite to the Natchez, till you come to the Arkansas river, whose mouth is two hundred and fifty leagues above New-Orleans.

Here there are but a few families, who are more attached to the Indian trade (by which chiefly they live) than to cultivation. There is no settlement from this place to New-Madrid, which is itself inconsiderable. Ascending the river you come to Cape Girardeau, St. Genevieve and St. Louis, where, though the inhabitants are numerous, they raise little for exportation, and content themselves with trading with the Indians and working a few lead mines. This country is very fertile, especially on the banks of the Missouri, where there have been formed two settlements, called St. Charles and St. Andrew, mostly by emigrants from Kentucky. The peltry procured in the Illinois is the best sent to the Atlantick market: and the quantity is very considerable. Lead is to be had with ease, and in such quantities as to supply all Europe, if the population were sufficient to work the numerous mines to be found within two or three feet from the surface in various parts of the country. The settlements about the Illinois were first made by the Canadians, and their inhabitants still resemble them in their aversion to labour, and love of a wandering life. They contain but few negroes, compared to the number of whites; and it may be taken for a general rule, that in proportion to the distance from the capital, the number of blacks diminish below that of the whites; the former abounding most on the rich plantations in its vicinity.

General description of Upper Louisiana.

When compared with the Indiana territory, the face of the country in Upper Louisiana is rather more broken, though the soil is equally fertile. It is a fact not to be contested, that the west side of the river possesses some advantages, not generally incident to those regions. It is elevated and healthy, and well watered with a variety of large rapid streams, calculated for mills and other water works. From Cape Girardeau, above the mouth of the Ohio, to the Missouri, the land on the east side of the Mississippi is low and flat, and occasionally exposed to inundations; that on the Louisiana side, contiguous to the river, is generally much higher, and in many places very rocky on the shore. Some of the heights exhibit a scene truly picturesque. They raise to a height of at least three hundred feet faced with perpendicular *lime and free-stone*, carved into various shapes and figures by the hand of nature, and afford the appearance of a multitude of antique towers. From the tops of these elevations, the land gradually slopes back from the river, without gravel or rock, and is covered with valuable timber. It may be said with truth that, for fertility of soil, no part of the world exceeds the borders of the Mississippi; the land yields an abundance of all the necessaries of life, and almost spontaneously; very little labour being required in the cultivation of the earth. That part of Upper Louisiana, which borders on North Mexico, is one immense *prairie;* it produces nothing but grass; it is filled with buffalo, deer, and other kinds of game; the land is represented as too rich for the growth of forest trees.

It is pretended that Upper Louisiana contains in its bowels many silver and copper mines, and various specimens of both are exhibited. Several trials have been made to ascertain the fact; but the want of skill in the artists has hitherto left the business undecided. [b.]

The salt works are also pretty numerous: some belong to individuals; others to the public. They already yield an abundant supply for the consumption of the country; and if properly managed, might become

an article of more general exportation. The usual price per bushel is 150 cents in *cash* at the works.—This price will be still lower as soon as the manufacture of the salt is assumed by government, or patronised by men who have large capitals to employ in the business. One extraordinary fact relative to salt must not be omitted. There exists about 1000 miles up the Missouri, and not far from that river, *a Salt Mountain!* The existence of such a mountain might well be questioned, were it not for the testimony of several respectable and enterprising traders, who have visited it, and who have exhibited several bushels of the salt to the curiosity of the people of St. Louis, where some of it still remains. A specimen of the same salt has been sent to Marietta [c]. This mountain is said to be 180 miles long, and 45 in width, composed of solid rock salt, without any trees, or even shrubs on it. Salt springs are very numerous beneath the surface of this mountain, and they flow through the fissures and cavities of it. Caves of saltpetre are found in Upper Louisiana, though at some distance from the settlements. Four men on a trading voyage, lately discovered one several hundred miles up the Missouri.—They spent five or six weeks in the manufacturing of this article, and returned to St. Louis with 400 weight of it. It proved to be good and they sold it for a high price.

The Geography of the Mississippi and Missouri, and their contiguity for a great length of way, are but little known. The traders assert, that 100 miles above their junction, a man may walk from one to the other in a day; and it is also asserted, that 700 miles still higher up, the portage may be crossed in four or five days. This portage is frequented by traders, who carry on a considerable trade with some of the Missouri Indians.—Their general route is through Green Bay, which is an arm of Lake Michigan; they then pass into a small lake connected with it, and which communicates with the Fox river; they then cross over a short portage into the Ouiconsing river, which

unites with the Mississippi some distance below the falls of St. Anthony. It is also said, that the traders communicate with the Mississippi above these falls, through Lake Superior—but their trade in that quarter is much less considerable.

CANAL OF CARONDELET.

Behind New Orleans is a canal about 1½ mile long, which communicates with a creek called the Bayou St. Jean, flowing into Lake Ponchartrain. At the mouth of it, about 2½ leagues from the city, is a small fort called St. Jean, which commands the entrance from the Lake. By this creek the communication is kept up through the Lake and the rivulets to Mobile and the settlements in West Florida. Craft drawing from 6 to 8 feet water can navigate to the mouth of the creek, but except in particular swells of the Lake cannot pass the bar without being lightened.

ST. BERNARDO.

On the east side of the Mississippi, about five leagues below New Orleans and at the head of the English Bend, is a settlement known by the names of the Poblacion de St. Bernardo, or the Terre aux Bœuf, extending on both sides of a creek or drain whose head is contiguous to the Mississippi, and which flowing eastward, after a course of 18 leagues, and dividing itself into two branches, falls into the sea, and lake Borgne. This settlement consists of two parishes; almost all the inhabitants of which are Spaniards from the Canaries, who content themselves with raising fowls, corn and garden stuff for the market at New Orleans. The lands cannot be cultivated to any great distance from the banks of the creek, on account of the vicinity of the marsh behind them, but the place is susceptible of great improvement, and of affording another communication to small craft of from eight to ten feet draught between the sea and the Mississippi.

SETTLEMENTS BELOW THE ENGLISH TURN.

At the distance of 15 leagues below New Orleans, the settlements on both banks of the river are of but small account. Between these and the fort of Placque-

mines, the country is overflowed in the spring, and in many places is incapable of cultivation at any time, being a morass almost impassable for man and beast. This small tongue of land extends considerably into the sea, which is visible on both sides of the Mississippi from a ship's mast.

COUNTRY FROM PLACQUEMINES TO THE SEA, AND EFFECT OF THE HURRICANES.

Placquemines to the sea is 12 or 13 leagues. The country is low and swampy, chiefly covered with reeds, having little or no timber, and no settlement whatever. It may be necessary to mention here that the whole lower part of the country from the English Turn, downwards, is subject to overflowing in hurricanes, either by the recoiling of the river, or reflux from the sea on each side, and on more than one occasion it has been covered from the depth of from 2 to 10 feet, according to the descent of the river, whereby many lives were lost, horses and cattle swept away, and a scene of destruction laid. The last calamity of this kind happened in 1794, but fortunately they are not frequent.—In the preceding year the engineer who superintended the erection of the fort of Placquemines, was drowned in his house near the fort, and the workmen and garrison escaped only by taking refuge on an elevated spot in the fort, on which there were, notwithstanding, 2 or 3 feet water.—These hurricanes have generally been felt in the month of August: their greatest, lasts for about 12 hours. They commence in the southeast, veer about to all points of the compass, are felt most severely below, and seldom extend more than a few leagues above New Orleans. In their whole course they are marked with desolation. Until that of 1793, there had been none felt from the year 1780.

Passes, or mouths of the Mississippi.

About 8 leagues below Placquemines, the Mississippi divides itself into three channels, which are called the Passes of the river, viz. the East, South and West Passes. Their course is from five to six leagues

to the sea. The space between is a marsh with little or no timber on it; but from its situation, it may hereafter be rendered of importance. The East pass, which is on the left hand going down the river, is divided into two branches about two leagues below, viz. the pass a la Louvre, and that known to mariners by the name of the Belize, at which there is a small block house and some huts of the pilates who reside only here. The first of these secondary channels contains at present but 8 feet water; the latter from 14 to 16, according to the seasons. The South pass, which is directly in front of the Mississippi, has always been considered as entirely choaked up, but has 10 feet water. The S. W. pass, which is on the right, is the longest and narrowest of all the passes, and a few years ago had 18 feet water, and was that by which the large ships entered and sailed from the Mississippi. It has now but 8 feet water, and will probably remain so for some time. In speaking of the quantity of water in the passes, it must be understood of what is on the bar of each pass; for immediately after passing the bar, which is very narrow, there are from 5 to 7 fathoms at all seasons.

Country east of lake Ponchartrain.

The country on the east side of lake Ponchartrain to Mobile, and including the whole extent between the American line, the Mississippi above New Orleans, and the lakes, (with the exception of a tract of about thirty miles on the Mississippi, and as much square, contiguous to the line and comprehending the waters of Thompson's creek, Bayou Sara and Amet) is a poor thin soil, overgrown with pine, and contains no good land whatever, unless on the banks of a few small rivers. It would however afford abundant supplies of pitch, tar, and pine lumber, and would feed large herds of cattle.

NEW ORLEANS.

By recurring to maps and examining the position of Louisiana, it will appear, that the lower part projects considerably into the sea. It has in all probability

been formed by the sediment brought down by the current and deposited on the flat coast. There is therefore on the east side but a very narrow slip along the bank of the river, from the sea to the Iberville. The land is not generally susceptible of cultivation more than a mile in depth from the river, the rest is low and swampy to the lakes and the sea, but in general, abounds with cypress timber, which is sawed by mills, which are worked by artificial streams from the Mississippi, in the time of freshes. They generally run five months in the year.

What has been said of the east equally applies to the west side of the river. The soil and situation are nearly the same. After leaving the bank of the river, there is an immense swamp, intersected by creeks and lakes extending to the high lands of Atacapas, and occupying a space of 30 or 40 leagues.

The city of New Orleans, which is regularly laid out on the east side of the Mississippi, in lat. 30 N. and long. 90 W. extends nearly a mile along the river from the gate of France to the south, to that of Chapitoulas above, and a little more than one third of a mile in breadth, from the river to the rampart; but it has an extensive suburb on the upper side. The houses in front of the town and for a square or two backwards, are mostly of brick, covered with slate or tile, and many of two stories. The remainder are of wood covered with shingles. The streets cross each other at right angles, and are 32 French feet wide. The squares between the intersections of the streets have a front of 300 French feet. There is in the middle of the front of the city a place d'armes, facing which the church and town house are built. There are from 12 to 1400 houses in the city and suburbs. The population may be estimated at 10,000, including the seamen and garrison. It was fortified in 1793, but the works, originally defective, could not have been defended, and are now in ruins. The powder magazine is on the opposite bank of the river.

Number of inhabitants.

According to the census of Louisiana, including Pensacola and the Natchez, as made in 1785, the whole number of inhabitants amounted to 32,252, of which 14,215 were free whites, 1303 free people of colour, 16,544 slaves.

The statement from the latest document, makes the whole number 42,375—the free whites, 21,244—the free people of colour, 1763—and the slaves, 19,168. A conjectural estimation made by a gentleman of great respectability and correct information, residing at Natchez, raises the number of whites in the island of New Orleans, on the west side to 50,150, and the number of blacks to 30,820.

It is at all times difficult to obtain a full census of a country, and the impediments are increased in this from its scattered population. The actual enumeration may therefore fall short of the true numbers.

Cultivation of sugar.

The sugar cane may be cultivated between the river Iberville and the city on both sides of the river, and as far back as the swamps. Below the city however the lands decline so rapidly that beyond 15 miles the land is not well adapted to it. Above the Iberville the cane would be affected by the cold and its produce therefore be uncertain. Within these limits the best planters admit that one quarter of the cultivated land of any considerable plantation may be planted in cane, one quarter left in pasture, and the remaining half employed for provisions, &c. and a reserve for a change of crops. One Pausian Arpent of 180 feet square may be expected to produce on an average 1200 weight of sugar, and 50 gallons of rum.

From the above data, admitting that both sides of the river are planted for 90 miles in extent, and about $\frac{3}{4}$ of a mile in depth, it will result that the annual product may amount in round numbers to 25,000 hogsheads of sugar, with 12,000 puncheons of rum. Enterprising young planters say that one-third, or even one-half of the arable land might be planted in cane.

It may also be remarked that a regular supply of provisions from above at a moderate price would enable the planter to give his attention to a greater body of land cultivated with cane. The whole of these lands as may be supposed are granted; but in the Atacapas country, there is undoubtedly a portion, parallel to the sea-coast, fit for the culture of the sugar cane. These vacant lands are to be found, but the portion is at present unknown.

In the above remarks the lands at Terre aux Bœuf, on the Fourche, Bayou, St. Jean, and other inlets of the Mississippi, south of the latitude supposed to divide those which are fit, from those which are unfit, for the cultivation of the cane, have been entirely kept out of view. Including these, and taking one third instead of one fourth of the lands fit for sugar, the product of the whole would be fifty thousand, instead of twenty-five thousand hogsheads of sugar.

Sugars exported.

The following quantities of sugar, brown, clayed and refined, have been imported into the United States from Louisiana and the Floridas, viz.

In 1799	773,542lb.
1800	1,560,865
1801	967,619
1802	1,576,933

Imports and exports.

The productions of Louisiana are—sugar, cotton, indigo, rice, furs and peltry; lumber, tar, pitch, lead, flour, horses and cattle. Population alone is wanting to multiply them to an astonishing degree. The soil is fertile, the climate salubrious, and the means of communication between most parts of the province certain, and by water.

20,000 bales of cotton, 3 cwt each, at 20 cts. per lb	$ 1,344,000	Increasing
45,000 casks sugars, 10 cwt each at 6 cts. per lb	302,400	ditto.
800 do. molasses, 1000 gallons each.	32,000	ditto.

Indigo,	100,000	Diminishing rapidly
Peltry,	200,000	
Lumber,	80,000	
Lead, corn, horses, cattle,	uncertain	
All other articles suppose	100,000	
Total	$ 2,158,000	

According to the official returns in the treasury of the United States, there were imported into our territory from Louisiana and the Floridas, merchandize to the following amounts, in the several years prefixed:

In 1799 to the value of	$ 507,132
1800	904,322
1801	956,635
1802	1,006,214

[b] A fact relative to the existence of *silver mines* in Louisiana, may by mentioned here, on the authority of an old gentleman (Jonathan Swift, formerly of Jacob's creek iron works,) who had visited a mine in that country several times under the agency of a company in the western country.

This old gentleman assured me that a mine of silver had been discovered—that dollars had been coined, and all that could not be brought away were buried at the spot—that he had brought from thence horse loads of dollars at different times, and that he descended the Ohio for the purpose of renewing the companys funds about the year 1791, and that in this last trip one of his companions having unguardedly dropped a hint on the road of their pursuit, they were closely pursued and watched so narrowly, that when they got within two or three days journey of the mine, they were obliged, in order to deceive their followers, to run a contrary direction to that where they knew the mine lay; that after every manœuvre, they found it impossible to go to the spot without being discovered; they therefore after an absence of near 2 years, returned home, to the no small chagrin and disappointment of the company.

The old gentleman informed that this company consisted of about twenty of the principal men in this country, some of whom which he named, and who I have since heard of as belonging to such a company now reside in the Forks of Yough; that said company was formed about fifteen years prior to the time of this communication, which was made in 1793 or 1794. This old gentleman if he be still alive, must be about sixty years of age.

[c] Conversing a few days ago with a gentleman immediately from St. Louis, whose information may be relied on, and to whom I put some questions as to the existence of this salt mountain; he replied, that the account which had been published was probably incorrect as to the length and breadth of the mountain; but that in some places on the bank of a creek which washes it, it raises perpendicularly to the height of 300 feet; that the hunters had long been accustomed to get their supply of salt from this place, for which they went out of their road fifteen miles; that the springs which issue out of these bluffs, bring with them vast quantities of salt, which may be scooped up at the foot of the hill by hogsheads full of good and pure salt; that the waters of a western branch of the Arkansas, which takes its rise from the springs of this mountain, are remarkably salt. He further observed, that high up the Missouri, there is a plain or prairie, whose surface is so hard that the foot of a horse scarcely makes any impression upon it; and that after a rain-fall and then a warm sun, there is seen on the surface a fine and beautiful salt, as fine as the finest used on the tables; that the Indians scrape this up for their own use with their hands or the wing of a turkey. This gentleman had different specimens of the salt of that country with him, which he intended presenting to the president of the United States, and to Congress now in session.—1805.6.

The same gentleman observed, that a considerable distance back of St. Louis there is a large parcel or body of both animal and human bones mixed altogether promiscuously over a space of ground of 300 yards, some lying, and others sticking up; that a large tooth found here had been presented to the baron Carondelet, while in that country, who pronounced it to be the tooth of an elephant.

Directions to Captains of Vessels bound to the Mississippi.

THE mouth of this river is in lat. 29° 6′ N. Try to keep in the latitude, and bring the blockhouse to bear W. N. W. 3 degrees N. and run for it;—May run into 10 fathom water with safety, and anchor if necessary.—The anchorage is good every where. When in and bound up the river with a trading wind, run from point to point, taking care to keep out of the bends. If obliged to anchor, be careful to come too on the point.

A brief account of the Missouri river, and the extensive and fertile country through which it winds, as traversed by captain Lewis and captain Clark—A short

notice of the Indians and their customs—different kinds of wild animals—fowls—fish—curiosities &c. And of the Columbia river.

THE Missouri river for a series of years prior to the voyage of discovery under captain Lewis and captain Clark, had become a subject of much interest and speculative conversation among all classes of people of the U. States. Like all subjects of history, of which we know only a part, it became the more interesting, and much more curiosity was excited, on account of its sources never having been known or explored.—And on account of an idea having prevailed that a nation of white people, supposed to be Welsh, lived high up towards its head. A thousand conjectures were constantly afloat, until the return of the fortunate travellers, whose letters and publications give us data to go upon of the most authentick and respectable kind.

Shortly after the acquisition of Louisiana, this voyage was set on foot by Mr. Jefferson, president of the United States; and after selecting men who appeared to be the best calculated for so serious and important an undertaking, the party consisting of 45 men, collected prepared for the journey at the mouth of the river Du Bois or Wood river, one mile below the mouth of the Missouri; from which place they set out on their intended voyage of discovery, on Monday the 14th of May 1804, all in health and spirits.

For about 100 miles up the Missouri there are several settlements of white people; among these are the villages of St. Charles and St. John's, which are the principal ones; St. John's being the uppermost and the last on the river. The country is rich and level, bearing cotton wood, sycamore, oak, hickory, &c.

About 200 miles up, the river becomes very broad, measuring 875 yards across, and 50 miles above, narrows again to 300 yards in breadth. The Osage river now enters the Missouri; it is tolerably extensive, and is 197 yards across. It takes its name from the Osage nation who reside on its borders, and who are a re-

markably tall, large, and ferocious set of people, making all other nations fear and dread them. The extensive prairies now begin to shew themselves, over which the eye is carried for miles without a single tree to stop the view.—Mulberry trees are numerous along the banks of the river.

The Kanzas river, whose soil and country is claimed by the Kanzas nation of Indians, flows through a fine rich country, and where it enters the Missouri it is 230 yards wide. It is about 650 miles above the mouth of the Missouri.—Grapes are found here in abundance, and the country is one continued prairie. Iron ore sometimes discovers itself on the sides of the bluffs or high banks of the river.

The Platte river is a beautiful stream, gentle in its current, and said to wind several hundred miles through the country, and where it enters the Missouri it is three quarters of a mile broad. It empties itself in on the south side. It is about 330 miles above the Kanzas river, and the party reached it in about 60 days. Up this river there are three nations of Indians, the Otos, Panis, and Loos or Wolf Indians.—Beaver are frequently seen and shot by the party.—Country flat but well timbered—deer plenty and some prarow, which are about the size of a ground hog and nearly of the same colour.

On the third of August, our party held a council with the Otos and Missouris Indians, who appeared well pleased with the change of government. Six of them were made chiefs and presented with some trinkets. By observation the latitude was found to be 41° 17′ N.—A pelican was killed whose bag or pouch held five gallons of water—elk are plenty.

The Missouri now becomes very crooked and serpentine—some high land appears—with large prairies—pike, cat and sunfish are plentifully caught with hook and line.

Ignorance is the parent of superstition. As an instance of this the party visited a hill which the natives

dare not approach on account, they say, that it is the residence of a little people of whom they are afraid.

On the 20th August one of the men of the name of Floyd, a sergeant, died at Floyd's river, where he was decently interred.—The bluffs which approach high on the river are of different colours, white, black, &c. On the 30th August, a council was held with the Sioux nation of Indians, with whom a peace was made, and several dignified with the appellation of chief.—But before they set in council they went through the ceremony of dancing backwards, and singing around the camp. Their instruments of musick are dried skins filled with pebbles; the shaking of these mixed with the voice, make a kind of jargon they seem to be very fond of.

In some of the hills which approach close to the river, copperas, and allum were discovered—and old fortifications in this country as well as in ours, are sometimes met with. The party visited one whose two ends run at right angles to the river, and whose outside was 2500 yards in length.

Buffalo, goats, antelopes, prairie dogs, and white wolves are frequently killed by the party.—On the 8th September they passed a trading house which was built by the traders from St. Louis, in 1796. On the 10th September they found on a high bluff the skeleton or backbone of a fish 45 feet long. It being in a state of petrifaction and considered a curiosity, part of the bones were preserved and sent back with the party who returned from fort Mandan to St. Louis, whence they were conveyed to the city of Washington, as a present for the president of the United States.

One of the men got lost, and was absent 16 days; his ammunition failing, he subsisted 12 days solely on grapes and berries.—Salt springs are now and then met with off from the river.—The river gets shallow and the current rapid, so much so that the boats have to be pul'ed by hand over the sand bars, ripples, &c.—Musquitoes are very troublesome—porcupine, hares and

beaver caught.—Black tailed or mule deer are numerous, and frequently killed by the party.

The Missouri has some fine wide bottoms on each side, which are covered with a great variety of wood, among which is a good deal of cedar.—The black bluffs frequently approach to the banks.

The Sioux, Mahas, Algonquins and Rickaree Indians appear to have some notion of agriculture. Their squaws have gardens, and they raise beans, squashes, and tobacco. They have also large cornfields.—The Mandans are also industrious in this way. These nations overrun a large space of country, and reside about 1500 miles from the mouth of the Missouri.

On the 22d Sept. they passed a fort built on an island in the Missouri by a trader of the name of Lucelle.—The Indians here have a singular method of making their dogs useful, and subservient to their idle habits. They cut long poles, which they make into a kind of car, and on them they tie their skins and other articles; the cars are then fastened to the dogs, who drag them thus loadened from camp to camp, each dog hauling about 70 pounds.—With almost all idle and rude nations, the custom of training dogs to labour, seems to be more or less prevalent.

In treating with the Sioux nation, our commanders, Lewis and Clark, were made to get into a buffalo robe one at a time, and were thus carried by eight men to the council house. Dogs were killed by the Indians for the party to feast on. The Indians eat and smoked during the day, the women passed the night in dancing. This nation have about 80 lodges, each containing 10 persons. Their clothing is principally of the buffalo hides, which are dressed and prepared by the women. The huts or lodges are also covered with buffalo robes. They are a friendly people, disposed to pilfer, and very dirty. Their band of musick consists of ten or more men beating on a buffalo hide, and shaking little bags filled with small stones. The women participate in these feasting dances by forming into a solid column around the fire with sticks in their

hands, on which are generally fastened the scalps of an enemy over whom they have been victorious. They keep moving altogether around the fire, jumping, or rising and falling on both feet, sometimes half bent, other times quite erect, singing and yelling a song understood only by themselves.

A council was held also with the Rickarees, who live several days journey above the Sioux nation. Our party gave them some presents, and in return they got corn, beans, and tobacco.

The goats and buffalo become very numerous; hundreds are seen in a flock on the sides of the hills.—The bottoms are covered with cotton wood, but the hills are very naked.—A stratum resembling coal appears on the side of a bluff.

Our party arrive at the village of the Mandans, among whom they found an Irishman. They halted here to hold a council with the natives, and to prepare for winter quarters, it being the 27th of October.

In a few days the principal men of each village of the Mandans, the Watasoons, Sioux and Grossventers assembled and sat in council, in which captain Lewis delivered a speech, explaining the change in the government, and the wish of the president of the United States to befriend all the tribes, and be considered by them as their great and good father. The chiefs manifested satisfaction, and each was presented with a new suit of clothes and a medal.

Winter quarters were now seriously thought of, and a place being fixed upon, a fort was erected in two or three weeks, which was called *Fort Mandan*. It is 1610 miles from the mouth of the Missouri, in lat. 47° 21′ 32″ N.—During the winter, which was very cold, the party spent their time principally in hunting, and keeping up a friendly intercourse with the natives, from whom they received much friendship and attention, being supplied by them with corn, beans, tobacco, and buffalo robes.

Buffalo and deer are very numerous here. The Indians have a singular method of hunting the buffalo on

horseback: They approach close enough to shoot them with their bows and arrows; but on firing the horse is trained to turn and fly off immediately, for fear of an attack from the wounded buffalo, who in this case is remarkably ferocious.

These tribes do not bury their dead, but wrap the corpse up in a buffalo robe, and lay it on a scaffold, exposed to the sun and weather.—The manner in which they keep their horses through the winter, is thus:—They let them run out in the woods in the day time, and get what they can; and at night they lodge in the same hut with their masters, and are fed upon cotton wood branches; in this manner they winter tolerably comfortable.

On the 7th April, 1805, a periogue with 13 men, was despatched from fort Mandan for St. Louis, with despatches to the government, together with a variety of curiosities for the president.—On the same day, the party, consisting of 31 men, and a squaw, their interpreter's wife, left fort Mandan and proceeded on their voyage up the river.

A few days journey above fort Mandan, they discovered a bluff which had been lately on fire, and which had thrown up abundance of pumice stone.—The place smelt strongly of sulphur.—This accounts for the pumice stone having frequently been found floating on the Missouri.

About 90 miles above the Mandan villages the Little Missouri empties in on the south side. It resembles its namesake exactly in the colour of its water, current, and taste.—Some of the tops of the hills here as white as chalk.—The hills generally, begin to grow larger; the bottoms pretty much the same as lower down.—Bears, antelopes or goats, wild geese, buffalo, deer, elk and beaver are very numerous.—The river gets rapid and very crooked.—Very little rain or dew in these parts.

Two hundred and seventy-eight miles above fort Mandan, 186 from the Little Missouri, and 1888 from the mouth of the Missouri, the Jaune or Yellow-stone

river empties in. It is 858 yards wide at its mouth, and the Missouri is at this place 527 yards broad, and is deep and rapid in its current and full of sand bars.—The Yellow-stone is very shallow.

Very large brown and white bears, which are very powerful and ferocious, and had several times like to have killed some of the hunters.—Hills covered with pine and cedar, the bottoms with cotton wood—country more broken.—River beautiful and 300 yards broad—its waters become more clear.—In lat. 47° 00′ 24″ N. the Muscle-shell river empties in on the south side, 660 miles above fort Mandan; it is 110 yards broad. The Missouri here is 222 yards wide.—The Ibex or mountain sheep are tolerably plenty.—A large rapid in the river; with much difficulty the canoes were got through it.—The country presents little else to view but scenes of steril barrenness—the bed of the river is rocky.—The Indians drive the buffalo down precipices, and in this manner kill great numbers of them.—Buffalo paths 10 feet wide.—Curious cliffs 200 feet high and not more than 10 feet thick; at a distance these peaks look something like the remains of an ancient city.—The country is more pleasant—wide timbered bottoms—fine islands in the river, covered with willows and cotton wood. A large mountain sheep killed whose horns weighed 25 pounds: hills perfectly bare of timber. A plant resembling flax grows in the bottoms in great abundance.

On the 2d of June, the party arrived at the forks of two rivers, in lat. 47° 24′ 12″ N. Some difficulty arose which of those rivers was the Missouri, or which would afford the best navigation, and lead the nearest to the course they wished to pursue. After sending a party up each branch 50 or 60 miles, they returned and determined the south branch to be the Missouri, and that which afforded the best navigation; it is 372 yards broad; and the north branch which they called Maria's river, is 186 yards wide. After burying here 1000 pounds of their stores and baggage, they pursued their voyage up the south branch. Goose, choak,

straw and rabbit berries are numerous. Both these rivers abound in fish. The south branch had for 2 or 3 days the appearance of claret, but again assumed its usual muddy colour. This red colour of the water must arise from the number of red cliffs on the river, which crumble and cave in every rain that falls. The river becomes rapid and in some places difficult to ascend; and full of small islands.

On the 14th June they arrived at the rapids below the great falls of the Missouri. Here they were tightly engaged in transporting their effects around the portage, until the 3d of July. These falls are 18 miles long, and in that distance descend 362 feet 9 inches: The first great pitch is 98 feet, the second 19 feet, the third 47 feet 8 inches, the fourth 26 feet, and other small pitches and rapids, amounting in the whole to 362 feet 9 inches.

On the 27th of June a dreadful hail storm fell, and hurt some of the men very much; some of the stones weighed 3 oz. and measured 7 inches in circumference. At these falls are some beautiful springs of transparent water. Buffaloe, bears and wolves are seen here in droves, which afford fine sport for the hunters. Several new canoes are built here, and the men finish the last of their spirits before they depart from the landing above the falls. From observation, the falls are in lat. 47° 3′ 10″ N. and 2575 miles above the mouth of the Missouri.

From hence the party ascended the Missouri, and penetrated the Rocky mountains at the distance of 71 miles above the upper part of the portage, and penetrated as far as the Three Forks of that river, a distance of 180 miles further: Here the Missouri divides into three nearly equal branches at the same point. The two largest branches are so nearly of the same dignity, both measuring 60 yards across, that the officers did not conceive that either of them, could with propriety, retain the name of Missouri; and therefore called the north branch JEFFERSON, the west or middle branch MADISON, and the south branch GALLATIN rivers.—

The confluence of these rivers, at which they arrived on the 27th of July, is 2848 miles from the mouth of the Missouri, by the meanders of that river, and in lat. 45° 22′ 34″ N.

The most northerly of the Three Forks, that to which they had given the name of Jefferson river, was deemed the most proper to ascend, and they accordingly ascended it 248 miles to the upper forks, and its extreme navigable point; making the total distance to which they had navigated the waters of the Missouri 3096 miles, of which 429 lay within the Rocky mountains, and for that distance the Missouri is difficult of navigation; being quite narrow in some places, very rapid, full of rocks, and closely bounded by very high hills on both sides; sometimes however the hills recede and leave fine open vallies in which are found great numbers of black, white and yellow strawberries, goose, service and choak-berries. Spruce, cedar and cotton wood trees on the shores. A rattle-snake is seen.—A mountain appears in sight covered with snow, July 28, while at the Three Forks.—Buffaloe become very scarce, and but a few deer or goats are seen. An island in Jefferson river exactly 3000 miles from the mouth of the Missouri, they therefore called it the *Three Thousand Mile Island*.—Otter and beaver plenty—canoes are obliged to be dragged frequently, owing to the shallowness of the river—a few fish of different kinds, some black trout.

At the head of Jefferson river, which they reached on the 17th of August, the party met with some of the Shoshone Indians, who live on the head waters of the Columbia river; with whom a talk was held, and they consented to assist in transporting the party's baggage over the mountains to the Columbia river, a distance of about 40 miles, and in giving every information of the best route to be pursued.

The Shoshones have a singular mode of address:—instead of shaking hands as a token or mark of friendship, they put their arms around the neck of the person they salute. This tribe lives very miserable; their

principal food being dried fish and berries.—They have great numbers of horses, on whose flesh they are sometimes obliged to subsist.

The party having purchased 27 horses of these Indians, and engaged a guide; and every thing being in preparation, they sat forward from the upper forks of Jefferson river on the 31st August, through these tremendous mountains, in which they continued until the 22d September before they reached the lower country beyond them. On their way they met with the Olelackshoot, a band of the Tukapaks, from whom the party obtain 7 horses more; this proved of infinite service to them, as they were compelled to subsist on horse flesh about 8 days before they reached the Kooskooske.

During the passage over the mountains the party suffered every thing which hunger, cold, and fatigue could impose, nor did their difficulties with respect to provisions, cease on their arrival at the Kooskooske; for although the Pallotepallars, a numerous nation inhabiting that country, were extremely hospitable, and for a few trifling articles furnished them with an abundance of roots and dried salmon, the food to which they were accustomed; the party found they could not subsist on these articles, and almost all of them got sick on eating them; they were therefore obliged to have recourse to the flesh of horses and dogs, there being little or no game to be had in those parts.

Having built some periogues, they re-embarked for the Pacific Ocean on the 7th of October; and continued down the Kooskooske 73 miles, Lewis's river 154 miles, and the Columbia 413 miles to the Pacific Ocean making the total distance from the confluence of the Missouri and Mississippi, to the discharge of the Columbia into the Pacific Ocean 3555 miles.

The natives are extremely numerous in this country, and proved very friendly; but the party on several occasions owed their lives, and the success of their enterprize, to their number. On the 17th November they reached the ocean; where in a fort erected by

the party on the south side of a little river called by the natives *Netul*, which discharges itself at a small bar on the south side of the Columbia, and 14 miles within Point Adams, they remained during the winter. This place they called *Fort Clatsop*, after a nation who were their nearest neighbours.—Elk, which are numerous here, formed their principal food during their winter quarters at this place.

The natives of this country have a singular method of creating fire by friction: They take two small sticks of wood, and laying one horizontally with its flat side up, the other is smartly rubbed on it perpendicularly, and after a few minutes rubbing, the smoke begins to rise, and shortly after a blaze, which fires the two sticks.

Man the greatest enemy of man—Some of the poor natives of the mountains, on being approached by the travellers, *fled from their camps crying*—but they were called back, and after being reconciled, presented the party with some berries and fish to eat. These poor and almost destitute creatures, make a kind of bread with the seeds of berries and roots pounded up together, then steamed, and baked on a kind of kiln.

The manner of their taking fish, is by fixing a sharp bone to the end of a long pole, and with this kind of spear they strike the fish with great dexterity. Some of the nations catch goats by running them down on horseback. In the warm season they seldom have any other clothing than that which nature was pleased to bestow on them. In the winters, which are intensely cold, they clothe themselves with a kind of robe made of the skins of the buffalo, goats, bears, deer, otter, beaver, &c.—and dried salmon is their principal food.—They work, very ingeniously, baskets of willow, with which they carry their water for drinking, cooking, &c.

The Flathead nation are said to be very friendly and much whiter than their neighbours. Their women form of small twigs a very ingeniously made comb, with which they comb their long black hair.

The Columbia river (which comes in from the north

west) where Lewis's river joins it, is 860 yards wide, and the latter 475 yards. They were both very low when our travellers descended them. The confluence of these rivers from observation is in lat. 45° 15′ 13″ 9 N.—As is the case with all our aborigines, the natives here bury all the property of the deceased with the corpse; even the canoe is split in pieces and set up around his grave.—The natives make their lodges with bulrushes and flags formed into a kind of mats—Geese and pelican—extensive plains and vallies.

About 75 miles below the junction of the Columbia and Lewis's rivers, is a fall of 37 feet 8 inches in the distance of 1200 yards; the greatest pitch being 20 feet perpendicular. For three miles below these falls the river is very deep and narrow, being but about 70 yards wide, and bounded by rocks. The latitude of this place is in 45° 42′ 57″ N.—Sea otters are seen swimming in the river, swan, ducks, gulls, brant, &c.—Springs of fine water fall 200 feet perpendicular.

The women near the mouth of the Columbia dress in a long fringe made of soft bark; this they tie round their waists, and it hangs down almost to their knees; another part of their dress consists in skins cut in thongs, and wove something like carpeting—A bay 12 or 14 miles wide—water salt.—The sea appears in view; and the great object of the voyage is now completely accomplished, that of discovering the best and nearest route by way of the Missouri and Columbia rivers to the Pacific ocean.

The river opposite Fort Clatsop, is 3 miles and 660 yards wide. The bay near the fort is in lat. 46° 19′ 11″ north—The Indians here make a hat of the bark of white cedar and bear grass, ingeniously worked, and which is water proof—Wapto roots and dried salmon their principal food—very little game about the sea shore.

Notwithstanding the season, January 1, 1806, the ticks, flies and insects are numerous—one of the men swim across a river after a raft. The skeleton of a whale was found on the sea shore, which measured 105

feet in length, and its head 12 feet—Trees of the fir kind grow here 12 or 15 feet in diameter—a supply of salt is made by our party from the sea water—the store of tobacco being exhausted, the men make use of crab-tree bark as a substitute.

The party having satisfied themselves with viewing the country, and making as much friendship with the natives as possible, during their winter quarters at the mouth of the Columbia, and having got things in preparation, they sat out up the river again on their homeward bound voyage, on the 27th of March 1806; and after crossing the Rocky mountains, on which they were detained by the impenetrable snows until the 24th of June, they again reached the Missouri and descended that river, and landed at St. Louis on the 23d September 1806, after an absence of two years, four months, and ten days, having lost but one man whose death has been already mentioned, during the voyage.

The feelings of the fortunate travellers after a return from so perilous a voyage; the joy evidently expressed in the countenance of the inhabitants of St. Louis, may be better imagined than correctly described—and the advantages resulting from this voyage of discovery, to the trade and commercial interests of the United States, will no doubt be very great in a few years, and more particularly so to the people of the western country.

"I consider this tract across the continent of immense advantage to the fur trade, as all the furs collected in nine tenths of the most valuable fur country in America, may be conveyed to the mouth of the Columbia, and shipped from thence to the East Indies by the first of August in each year; and will of course reach Canton earlier than the furs which are annually exported from Montreal arrive in Great Britain."*

Mr. Clark does not hesitate to declare that they have discovered the best route, such as nature has permitted, which does exist across the continent of North America in that direction: such is that by the way of

* Capt Clark's letter to his brother gen. Clark, near Louisville.

the Missouri to the foot of the rapids below the great falls of the Missouri river, a distance of 2575 miles, thence by land passing by the Rocky Mountains to a navigable part of the Kooskooske, 340 miles, thence to the ocean by the rivers before described. The passage by land of 340 miles from the falls of the Missouri to the Kooskooske, is the most formidable part of the tract proposed across the continent: of this distance 200 miles is along a good road, and 140 over tremendous mountains, which for 60 miles are covered with eternal snows.

P. S. In compiling these few pages respecting the Missouri, we have had frequent recourse to "Gass's Journal"—published in Pittsburgh by Mr. David M'Keehan. It is the daily journal of Mr. Patrick Gass, who was one of the party during this interesting voyage.

Descriptive Observations on certain parts of the Country in Louisiana; by Anthony Soulard, esq. Surveyor-general of Upper Louisiana, in a letter to J. A. Chevallié, esq. of Richmond. Translated from the French Manuscript by Dr. Mitchill.

Med. Rep.

THE Missouri, whose sources are still unknown, is, however, already classed amongst the largest rivers. It is an object of astonishment to every body. The uninstructed man admires the rapidity of its stream, its extraordinary length, the salubrity of its waters, and their uncommon colour. The experienced traveller is astonished at the riches scattered along its banks, and looking into futurity, beholds this rival of the Nile passing through countries as fruitful, as populous, and more extensive than those of Egypt.

The best informed observer can give but an imperfect idea of the riches accumulated on its shores.—

This note can only point out some of the principal.—Happily for our own time, an expedition is now going on under the auspices of an enlightened government, to explore this river to its sources. What gratitude is due from the whole world to those persons who expose themselves to the greatest fatigues, and even to the greatest dangers, to enlarge the circle of human knowledge in thus bringing, as it were, a new world to our view.

The Missouri unites with the Mississippi about five leagues above the town of St. Louis, in about the 40th degree of north latitude. And it must be remembered, that after this junction, it runs about 1200 miles before it falls into the gulf of Mexico. But as this part of its course is well known, I shall confine myself to the Missouri alone.

I have ascended this river about 600 leagues, without perceiving any diminution of its breadth or velocity.

The principal streams which fall into the Missouri, as you ascend it, are the *Gasconade*, the *Osage*, the two *Charatons*, the *Grand river*, the *river of the Plains*, the *Nichinan*, the *Batoney*, the *Great and Little Nimahas*, the *Platte*, the *Sioux*, the *Running Water*, and others.

For 25 leagues above its junction with the Mississippi, there are different settlements of American families, especially at *Bonhomme*, *Femmeosage*, &c. beyond these the banks are inhabited by savages only. The Great and Little *Osages*, settled at 120 leagues on the waters called by their respective names, the *Cams*, the *Otas*, the *Panis*, the *Loups*, *or Panis Mahas*, the *Mahas*, the *Pincas*, the *Ricaras*, the *Mandanes*, and the *Sioux*. The latter tribe has no fixed habitation on the Missouri, but visit it regularly for the purpose of hunting.

The borders of the Missouri are alternately forests and *prairies* or cleared plains. The higher we go up this river, the more common are the prairies; and they seem to enlarge every year, in consequence of the fires which overrun them in autumn. These fires are kindled either by the Indians or the white hunters, some-

times by accident, and at others for the purpose of favouring their hunting.

The water of the Missouri is turbid, and deposits a sediment of very fine sand, which readily falls to the bottom. This admixture, which renders it unpleasant to the sight, diminishes not in the least its wholesomeness. Experience has proved it to be more salubrious than that of the Ohio and the upper Mississippi.

The rivers and streams that empty into the Missouri below the *Platte*, are clear and limpid; but above that river they are as turbid as the Missouri itself. This muddiness is caused by the sandy banks or hills of white earth through or down which they run. The bed of the Missouri is interrupted by shoals, sometimes of sand, and sometimes of gravel, which frequently change place, and consequently always render the navigation uncertain. Its general course is north, a quarter north-west.

To give a precise idea of the incalculable riches scattered along the sides of the Missouri, would require unlimited knowledge. The low bottoms are covered with huge trees, especially the poplar and cotton trees, large enough for first rate canoes; the sugar-maple; the red and black walnut, so useful to joiners; the red and white elm; the three-thorned acacia, of which impenetrable hedges may be made; the osier; the red and black mulberry; the lime-tree, and the horse-chesnut; all of which are very plentiful. Red and white oak, fit for vessels, and all other sorts of timber, pine, and, on the Stony mountains, cedar are common productions.

I find it impossible to enumerate all the trees which are yet unknown in other countries, and with whose uses and qualities we are as yet unacquainted. The smaller plants are still more numerous; I, however, touch that article superficially, for want of sufficient botanical information. The Indians know the virtues of many of them. Some are used to heal wounds, others to poison arrows; some again for dyeing colours; and they employ certain vegetable simples to cure radically

and promptly the venereal disease. They conceal from us, with great care, a plant which renders them for some instants insensible of the most vehement fire. I have seen them take hold of red-hot irons and burning coals without suffering any inconvenience.

The lands in the neighbourhood of the Missouri are excellent, and when cultivated are capable of yielding all the productions of the temperate climates, and even some of the hot ones; such as wheat, maize, and every kind of grain; common and sweet potatoes; hemp, which seems to be an indigenous vegetable; even cotton succeeds there, though not so well as further south; and the raising of it answers a good purpose for the families already settled on the river: for from a field of about two acres of this they obtain a crop sufficient to clothe a family. The natural prairies are a great resource for them. These afford excellent pasture, and require but little labour to clear them. After one year's exertion, a man may enjoy his fields duly prepared for crops. Brick and potter's earths are very common, and the true Chinese Kaolin is reported, by good judges, to be there, that substance to which porcelain owes its peculiar fineness. And there exist on the borders of this grand river salt springs enough to furnish salt for the country when it shall become inhabited, and a great deal to spare.

Saltpetre is found very abundantly in numberless caverns near the Missouri. The rocks are generally calcareous; though there is one which is peculiar to this river. It is of a blood-red colour, compact, yielding to a tool, hardening in the air, and receiving the neatest polish. The natives make their pipes of it. The strata are so extensive that there is any quantity that may be wanted for other purposes. There are also quarries of marble; but we know as yet little more than its colour, which is veined red. It is said there is a body of gypsum there; and this would not be difficult to explore. Volcanick productions are also found there, evincing the existence of burning mountains in former times, or in situations now unknown.

The short stay as usually made among the savage nations has hitherto been unfavourable to the acquirement of correct information concerning the mines and ores near the Missouri; we know with certainty of none other than those of iron, lead and coal: but from the accounts given by the Indians, there can be no doubt that tin, copper, and silver, are found in those parts; and particles of gold are said to have been picked up on the surface of the earth, and in the bottom of brooks.

The productions of the Missouri at this time are received from the Indians and the hunters, in exchange for goods and merchandise, and may be exhibited in the following table.

Missouri Produce.

Beaver	12,281 lb. at	$ 1 20	$ 14,737 00
Fox skins	802	0 50	401 00
Bear skins, black, grey, yellow and brown	2,541	2 00	5,082 00
Cow skins	189	1 50	283 50
Deer skins in the hair	6,381	0 50	3,190 50
Bears' grease	2,310 galls.	1 20	2,572 00
Otter skins	1,267 lb.	4 00	5,068 00
Raccoon skins	4,248	0 25	1,062 00
Bison hides or robes	1,714	3 00	5,142 00
Dressed deer skins	96,926	0 40	38,770 40
Tallow and fat	8,313	0 20	1,662 60
			$ 77,971 00

This table, which is made as correct as possible on an average of fifteen years, thus gives an amount of 77,971 dollars, without mentioning musquashes and martins. Calculating at the same rate, the value of the goods carried up the Missouri and exchanged for this peltry, would be 61,250 dollars, reckoning the charges to amount to a quarter part of the worth of the articles. From this it follows that the trade affords an annual profit of 16,721 dollars, or about a profit of 27 per cent.

If the Missouri trade, badly regulated, and without encouragement, gives annually such a profit, there can be no doubt of its increase, if encouraged by government. It must be observed, that the price fixed in the preceding table is that current at the Illinois. If the London price was taken, deducting freight and charges, the profit would appear much greater. If the Missouri, left to the savages, and having but a single branch of trade, affords such great returns, in proportion to the capital employed in it, what might we not expect from individuals or companies with large funds, aided by a numerous population, and devoting themselves to other sorts of traffick. Some of these, I am bold to say, may be undertaken with a certainty of success, when we consider the riches afforded by its banks, and of which, in this note, I have endeavoured to sketch an outline.

Dated at St. Louis, of the Illinois, March, 1805.

A GEOGRAPHICAL AND STATISTICAL SKETCH OF THE DISTRICT OF MOBILE.

SITUATION.

That tract of country which we have denominated the District of Mobile, is situated in the eastern part of the Mississippi territory, and comprehends the county of Washington on the Mobile* and its tributary streams and the new county of Madison in the great bend of the Tennessee.

The District of Mobile, as laid off for the purpose of collecting duties on imports and tonnage, comprehends the shores, waters and inlets of the bay and river Mobile and others emptying into the gulph of Mexico west of the Mobile to the Pascagola inclusive. That tract of country which we have here denominated the

* So called by the French, probably on account of the uncertainty of its freshes. Mobille instead of Mobile, is a name very lately introduced, probably from inadvertency.

district of Mobile lies between the 31st and 35th degrees of North latitude, and according to the maps, between about the 7th and 12th degrees of longitude west from the city of Washington.

BOUNDARIES.

This district is bounded on the North by the Tennessee state line, on the west by the Pearl river, and a line† running due north from its source to the Tennessee line; on the south by the boundary line between the United States and Florida, and on the east by the Chatahouchee river, as far as the mouth of the Uchee, and from thence by a direct line to Nickajack on the Tennessee river, and by that river itself, from Nickajack, up as far as the southern boundary of the state of Tennessee.

EXTENT.

From Mr. Ellicott's survey of the national boundary at the 31st degree of north latitude, it appears that Pearl river the western limits of this district, is 106 miles from the Mississippi, and that from Pearl river to the Mobile river it is 100 miles, and from thence to the Chatahouchee the western limit of Georgia 175 miles—making the whole extent of the district on the boundary line 275 miles. It appears in like manner from a map lodged in the war office by captain E. P. Gaines, that from the upper end of the Muscle Shoals on the Tennessee river due south to the national boundary it is 262½ miles, which after adding the distance from the Muscle Shoals to the Tennessee state line, will make the whole length of the district of Mobile about 280 miles.

So that this district, the existence of which is scarcely known to the American people, probably contains a greater number of square miles, than the important

† The proclamation establishing the county of Washington, made the territorial boundaries upon North, East and South, and Pearl river on the West, the limits of that country. The northern territorial boundary at that time crossed Pearl river: but the territory has since been extended so as to throw its northern limit above the source of Pearl river.

states of Pennsylvania or New York. However as a great proportion of it is claimed by the Indians, that part to which the Indian title has been extinguished, and which is partially settled by the citizens of the U. States approaches nearer to the extent of Maryland, New Jersey or Connecticut.

The United States have the absolute right of soil and jurisdiction from the Pearl river to the Creek line, but a few miles east of the eastern channel of the Mobile. The northern boundary between the land of the United States in this district, and the Choctaws, is where it crosses Pearl river, 52 miles north of the national boundary, but the eastern termination, on the dividing ridge, between the waters of Tombigby and Alabama, will probably be found (for the commissioners are now engaged in running it) to be considerably farther north from the Spanish line.

SOIL.

The soil of this district varies considerably in different parts of it. For the first 40 miles above the national boundary, the good land is, generally speaking, confined to the low grounds, of the larger water courses. The swamps, as they are called, of Pearl river, of the Estobacha and Chickasawhae, forks of the Pascagola, of the Mobile river, and of the Tombigby and Alabama, forks of the Mobile, are extensive, rich, and productive. The higher parts of the swamps are thickly covered with amazingly large and lofty cane, and the growth of timber, is cotton wood, gum, oak, bay, laurel and magnolia. The lower swamp lands have no cane, but a magnificent growth of cypress is intermixed with other timber. The highest part of the swamp, is generally nearest the river. There are no *levees* or embankments, as on the Mississippi, and the floods which occur in a greater or a less degree every year evidently increase the fertility of the land. The breadth of our river bottoms or swamps, varies very considerably. Probably they are for the most part from 1 mile to 3 miles wide, but more frequently less than 2 miles, than more than that width.

Below the division, indeed, of the Mobile river, between Fort Stoddart and the line, the whole of the river swamps, including that of its three channels, is from eight to ten miles wide; and the same may be said of the land lying in the forks of the Alabama and Tombigby, for the space of a few miles above their junction.

The other lands through this large extent of country, are generally open pine woods, affording good range for cattle, immense supplies of lumber, pitch, tar and turpentine, but whilst unmanured, affording no encouragement to tillage.

The same general observations which are here made, as to the country forty miles above the national boundary line, will apply to the country below the line; except that where you approach within 20 or 25 miles of the sea shore, the pine lands, instead of being deversified by hill and dale, as they are above, become a dead uninteresting flat, a great part of which is in the rainy season covered with water, so as to render it unpleasant, though not impracticable to travel through it.

At a greater distance than 40 miles from the national boundary, as you proceed northward, the face of the country and the natural soil considerably changes. Large bodies of fertile land, are then found at a considerable distance from the Tombigby river, and instead of the long-leafed pine alone, you behold a diversified and luxuriant growth of white oak, black oak, gum, magnolia, hickory, walnut, cherry and poplar. And the same observations hold good, not only as to the land west of the Tombigby, but likewise with regard to the land lying on the forks of that river and of the Alabama. Not however, that in either place, there are compact bodies of such rich lands, extending over a country of a great many miles in circuit, as in Kentucky and the state of Ohio; but there are several parcels of such land sufficiently large to support respectable settlements.

As to that part of the district which lies in the great

bend of the Tennessee, and forms the new county of Madison, the writer of this article can speak with no precision about it. The country however, in the Great Bend, has been uniformly represented, as containing a fine body of land of excellent quality, and the rapid formation of an extensive settlement there, as soon as the Indian title was extinguished, established the truth of this representation. The land is said to be rich, but very broken. The water courses all afford good land: and so indeed do the hills, but they are frequently too steep to admit of cultivation.

PRODUCE.

The actual produce of this country consist principally of Indian corn, and cotton. The river low lands, where not too wet, are probably as well adapted to the cultivation of those articles, as any land in America; and it is a circumstance very favourable to the opinion that the Sea-Island cotton would flourish well in the lower part of this country, that the green-seed cotton has a perpetual tendency to change into the smooth black-seed cotton, whereas in situations not favourable to the cultivation of the latter, it is said that it regularly degenerates into the former. The pine lands also, with the assistance of manure, provided the soil be sufficiently tenacious to hold it, will afford tolerable crops of corn and cotton; but no such assistance is necessary in the oak and hickory lands above, and much less on those rich bodies of land, which in a state of nature produce walnut, poplar and cherry. Some wheat, rye and oats for family consumption, are likewise raised in the good uplands; but wheat is by no means a certain or important crop. Small quantities of rice are cultivated in the river swamps; and there can be no doubt, but that there are many thousands of acres, very advantageously situated as to tide water, and at present useless, which might be profitably devoted to the production of that article.

Indigo, it is probable, would likewise be worthy of attention. Whether sugar cane would answer in the

lower part of the district, has not yet been subjected to experiment.

It is said not to admit of cultivation in so high a latitude of the Mississippi; but it is probable that the influence which the nearer position of the sea has upon the climate of the country on the Mobile, would justify the cultivation of the sugar cane on that river, in a latitude in which, on the Mississippi, it would be attended with no advantage.

Tar, pitch, turpentine and lumber will no doubt become objects of great magnitude in this country, when a deliverance from Spanish oppression shall give free scope to the exertions of its inhabitants. The pine timber which grows here is remarkably magnificent, and it is esteemed to be the best kind of pitch pine. It is so abundant, and stands so close on the ground, that in the space of 3 or 4 acres you will frequently find straight logs of 70 to 80 feet in length, sufficient in number to build a large log house. Saw mills, therefore, will become a valuable article of property, and there is no country probably in which the streams of water are permanent. We have no meadows, no artificial pastures, no timothy, no blue grass, no clover; we have but little fruit; apples are scarcely known; peaches are scarce, and yet both appear to flourish well, where attention has been paid to the cultivation.

CLIMATE.

The climate of the Mobile country is unquestionably highly favourable. The winters are mild, and the summers, though longer, not materially hotter than they are several degrees further to the northward.—The direct heat of the sun is no doubt very great in the summer, and very unpleasant to strangers; but those who are accustomed to it, whether negroes or white men, appear to work under its powerful influence, without any material inconvenience: the heat is seldom oppressive within doors, and the nights are more comfortable than they are even in Virginia. We have but little ice and rarely any snow. A few flakes fell, but none in the lower part of the settlement made any ap-

pearance on the ground during the last winter. The cattle, so far from wanting any winter supplies, from the industry of summer, will not in general eat either hay or corn: nor do they require any salt. Indian corn may frequently be planted with success early in March; but it will come to maturity though not planted till the middle of July. In the spring, water of this country near the 31st deg. Fahrenheit's thermometer, stands at 69 deg. which agrees with the mean annual temperature in the same latitude as ascertained by the ingenious Mr. Kirwan. He sets it down for the standard situation, the Atlantic ocean, at 69 deg. 9 min. The following extracts from a thermometrical register, kept in the years 1807 and 1808, near Fort Stoddart, will give the most accurate idea of the vicissitudes of our seasons. Those observations shall be selected which were made in the warmest time of the day, and at 10 or 11 o'clock at night;—and the hottest and coldest days in every month shall be noticed. The thermometer being completely in the shade, unless the contrary be particularly mentioned.

On the 15th April, 1807, being the hottest day in the month, the thermometer stood early in the afternoon at 82 deg. and at 71 deg. at night.

On the 2d April, being the coldest day, at 52 deg. at 2 o'clock.

On the 17th May, the hottest day, it stood at 90 and 80 deg.

On the 2d May, the coldest day, it stood at 66 and 61 deg.

On the 6th June, the hottest day, it stood at 90 and 82 deg.

On the 28th June, the coldest day, it stood at 82 and 69 deg.

On the 10th July, the hottest day, it stood at 94 and 78 deg.

On the 29th July, the coldest day, it stood at 74 and 65 deg.

The result of 23 observations in this month, taken in the hottest part of so many days, gives 86 deg. as the mean heat.

The only observation made in August was on the 2d, when the thermometer was at 88 deg. at 4 in the afternoon.

On the 5th of Sept. the hottest day in the month, it stood at 95 and 80 deg.

On the 8th, the coldest day (36 hours of rain having intervened since the 5th) it stood at 74 deg. only at 3 in the afternoon.

The mean temperature of this month in the hottest part of the day, calculated from 22 observations, was 84 deg.

In Jan. 1808, (for the register of the intermediate months is mislaid) it was at 55 deg. on the 8th at noon, at 61 deg. on the 9th, at 3 in the afternoon, at 56 deg. on the 21st at 2 P. M. and at 60 degrees at 10 P. M. rain having intervened.

On the 24th it was at 34 deg. at 8 A. M. at 52 deg. at 2 P. M. and at 76 degrees in the sun, and at 34 at 10 P. M.

On the 12th Feb. the warmest day in the month, it stood at 79 and 62 deg.

On the 8th, the coldest day, at 56 and 43 deg.

On the 29th in the sun, at 2 P. M. it stood at 99 deg. it was then 71 in the shade.

On the 28th day of March, the warmest day in the month, it stood at 86 deg. at 3 P. M.

On the 21st, the coldest day, it stood at 63 and 55 deg.

To the bulk of readers these details will afford no satisfaction: but to others they will be highly interesting, and will communicate a much more accurate idea of the climate than the more amusing descriptions which might be written under the dictate of corporal sensation. The progress of the spring may probably be gathered from the following memorandum: April 2d, the trees in the swamps in leaf; peach blossoms gone; green peas just in bloom. April 12th, pease (planted in Feb.) in pod; peaches the size of a hazel nut. Fig trees in leaf. May 2d, green pease at table, which were planted in February. Strawberries ripe.

May 16, mulberries ripe, blackberries, dew-berries and whortle berries ripe. May 13, cucumbers large and in perfection. We have no glasses or hot beds to force vegetation. June 29th, roasting ears at table. Lettuces and cabbage, though the latter do not head well, stand out very well all the winter.

In point of health, this climate is favourable, or otherwise, according to local circumstances. The prevailing diseases, are those of the class of cachexy, and the fevers usually termed bilious. Where our powerful southern sun brings the swamp miasmata into action, diseases seem to follow of course, and none but negroes well accustomed to the climate, can safely take up their residence in the low ground, on the banks of our rivers. That grade of fevers however, which is termed the yellow fever, does not seem to have made its appearance here; the high lands are probably as healthful as any so far to the south, and it is usual for those who cultivate the swamps, to have their residence in the pine woods, at some distance from their plantations.

STOCK.

Almost the only stock of the country on the Mobile and its waters, are horned cattle, hogs and horses.—The stocks of horned cattle are numerous. Many of the inhabitants have from 500 to 1000 head. The only expense attending them, is that of keeping them together, driving them off to a distance from the settlements in the fall, visiting them occasionally in the winter, to prevent the depredations of the Indians, and collecting them in the spring at their respective cowpens. The cows, however, do not generally have calves more than once in two years, and the milk they give, is far less in quantity than is given by cows in more northern countries. This is owing probably in part to the heat of the climate, and partly to the persecutions of the numerous swarms of flies, that perpetually torment them. They are rarely milked in the winter, as they are then kept at a distanre from the habitations of their owners. The usual price of a cow

and calf is 12 dollars, and of beef, from 3 to 3½ per hundred weight. Hogs are easily raised—In favourable seasons they fatten in the woods; but if they are not fed occasionally, they are very prone to go wild. The price of pork is generally 6 dollars per hundred weight. The enemies of the hogs and calves are the wolf and panther, and pigs are frequently destroyed by the wild cat and the alligator. Horses are not numerous. There is a sufficient quantity to answer the purpose of the inhabitants—but they are seldom raised for sale. A small breed of Indian horses seem the most hardy and best adapted to the climate—but the fine horses imported from the northern states, appear peculiarly liable to be affected by diseases similar to those which most frequently attack the human species.—Sheep are scarcely known. There are not probably one hundred head among all the settlers in the country of Washington. The few, however, which are kept, are healthy and thriving; but the wool is generally coarse, and some of them have a tendency to be hairy.

POPULATION.

The number of inhabitants in the county of Washington, amounts to about 5,000. The population of the county did not probably exceed 2,000—but the emigrations from Georgia and other states have recently been very considerable as to numbers, though not as to wealth. In the county of Madison it is said there are several thousands.

STATE OF SOCIETY AND IMPROVEMENTS.

The people are considerably dispersed, and have enjoyed but few opportunities for mental improvement. We have no colleges—no permanent schools—no regular places of worship—no literary institutions—no towns; no good houses, and but few comfortable ones.

Not many of our plantations exhibit any appearance of neatness, and the greatest part of our cotton is raised in open fields, in the river swamps, without even a fence to protect it. There are no manufactures carried on, except some small ones of cotton in the household

way. There are few mechanics, and scarcely any professional men but lawyers. This disheartening prospect originated partly, perhaps, in the negligence of the inhabitants, but still more probably in other causes.—The country long languished under the Spanish government. After the Americans obtained possession of it, the titles to land were for some years unsettled. But what has more than all retarded the prosperity of the district, is its insulated situation, and its political connexion with the Mississippi territory. Our neighbours on every side are Indians or Spaniards. We naturally catch the spirit and manners. We have heretofore been too small to form a distinct political community: and our being hung on to a territory, the seat of whose government and population is so remote from us, augmented the contemptibleness of our natural situation; and discouraged the approach of men, whose wealth and energies are necessary to make a country thrive. The rivers of this country, not extending as the Mississippi does, through populous settlements of civilised men, bring no visitants to our district, and the attention of emigrants by land, who have any money to spend, is naturally fixed on that part of the southern country which has some political consideration, which is more likely than ours to engross the care and the power of the local government, and to enjoy a representation in the national legislature. Hence this country, from its first settlement, has received but a small accession of agricultural or domestic improvement, of learning, or of taste.

TRADE.

The people of this district usually dispose of their beef, pork, and corn, to the Spanish subjects in Mobile and Pensacola. Corn usually sells at a dollar per Spanish barrel, which is at the rate of 66 cents per bushel. The cotton commonly goes to Orleans, but is compelled to stop at Mobile and pay a duty of 12 per centum ad valorem. As our population increases, our trade will assume a more respectable character.—We are close to the Havanna. Thither, and to the

West Indies generally, will go our provisions, our tar, pitch, turpentine and lumber. Our cotton will be transmitted direct to Europe; for vessels not drawing more then 13 or 14 feet of water, can come more easily to Fort Stoddart, six miles above the line, than they can go to New Orleans. Nor indeed will they meet with any obstruction in proceeding 40 miles farther to St. Stephens, which may be regarded as the head of our navigation for sea vessels, and at the same time the centre of our population. Above that, there is an excellent boat navigation almost to the heads of the Tombigby, the depth of water in the shallowest places, where there is a tolerable fresh, being 4 feet—Both forks of the Alabama are likewise navigable; and it is much to be lamented, that the first adventure down that stream, with the produce of Eastern Tennessee has, it is said, been stopped by a band of worthless Creek Indians, to whom the want of a super-intendant of Indian affairs in this country has long given a latitude of behaviour and a confidence in villainy, to which a speedy check is demanded by the honour of the United States, and the interests of this settlement.

OF WEST FLORIDA.

COMPLAINTS have been made, that scarcely any account exists of West Florida. The reasons are obvious to those who are acquainted with the country. Little has been written on the subject because the subject itself is a barren one. Florida presents but little interesting to the eye of the traveller, or of the political economist. Few have visited it generally; and the few that have visited it, have seen but little worth communicating. In fact, there is scarcely any such thing as travelling in West Florida, except in the district bounding on the Mississippi. As most of the settlements lie on the water, they are, generally speaking, approached by water only; and yet it is a country of immense importance to the United States. The dis-

trict at present attached to the Mississippi territory, called the district east of Pearl river, a district twice as large as Pennsylvania, and containing, perhaps, a greater proportion of good land, is watered by rivers which find their way to the gulph of Mexico through the sand hills and marshes of East and West Florida. At no very distant day, therefore, it may reasonably be calculated that one million of American citizens, to say nothing of those who live on the waters of the Mississippi, will find the possession of Florida essential to their happiness. Of how little moment soever, therefore, Florida may be considered in itself, yet its relative importance is great enough to account for, and to justify the curiosity which exists concerning it.

West Florida may properly be considered as divided into two districts, and indeed it actually is so divided by the Spanish government, so that in fact there is little or no intercourse between them. The western district, called New Feliciana, which has lately undergone a political revolution, comprehends the country laying between the Mississippi and Pearl river: and the eastern district, or West Florida proper, comprehends the country lying between Pearl river, and the Apalachicola. Pearl river, below the American line, is a boundary rendered almost necessary by the nature of the country. It not only spreads over the country in various channels near the sea; but it has extensive swamps, nearly impassable, several miles up the country, besides a considerable extent of that kind of flat, wet pine land, which is known in North Carolina and some other places by the name of Poccoson lands. Hence the next neighbours on the opposite side of the river, distant perhaps not more than twenty miles, have been obliged to go a hundred miles round to see one another. A late extension of settlements, however, has in some degree reduced this inconvenience.

The western district, or New Feliciana, is, in point of soil, by far the most valuable; and its position between the American settlements in the Orleans and

Mississippi territories, renders its tenure by a foreign power peculiarly inconvenient to the United States.

Commerce suffers less by it than public justice, and consequently the public morals and public order: for in all ages the existence of a sanctuary for criminals has always produced the greatest encouragement for crimes.

The eastern district of West Florida, though the most poor, is however by far the most interesting to the American nation, as without it an immensely valuable and extensive tract of country will be dependent for its prosperity on the pleasure of a foreigh monarch.

The reputation of that part of New Feliciana, which lies adjacent to the Mississippi has long been deservedly high; and the lands upon Thompson's creek and the Bayou Sara, are regarded as among the most valuable which bound upon the waters of that river. The settlement is rich and populous, and consists principally of Americans. The rivers Amite and Tickaw, which discharge themselves into Lake Maurepas, but which may be considered as connected by the Iberville and the Bayou Manchac with the Mississippi, as they are by the Manchac pass with lake Ponchartrain, are also said to be bounded by considerable bodies of fertile lands, though the high grounds at a distance from the rivers are of little value.—Those rivers have of late years been much resorted to by numerous bodies of emigrants, mostly poor, and principally from Georgia. There are also a few settlers, chiefly Americans, upon Tansipahoe, which discharges itself into lake Ponchartrain: and there are some French inhabitants on the Chefuncti river, still further to the east. The other streams which run into lake Ponchartrain, are Castain Bayou, Bayou Lacombe, and Bayou Boucfouca. There are probably four or five families on each of those creeks, who are generally French, and depend, as well as those on Chefuncti, less on the cultivation of the soil, than on raising cattle, and preparing lime, tar, pitch and turpentine for the market of New Orleans. The distance across the lake from

those settlements to the Bayou St. John, is about ten leagues.

The country between those two water courses is generally the poorest kind of pine land; and even a view of the beauties of the lake is denied to all except to a few who might have pleasant habitations on its margin for a space of five or six miles adjacent to the mouths of Chefuncti and Castain Bayou. On the west the lake is principally bounded by cypress swamps, and on the east by marshes, the soil of which is too loose to admit of being travelled over. This kind of soil, if it can be called soil, of this uninhabitable country, continues on, by the mouths of Pearl river, to within a few miles of the bay of St. Louis.

From the Bayou Boucsouca, there are no settlements till you reach Pearl river itself, and its tributary stream the Bogue Chitto. Here Dr. White, a member of congress from the state of Tennessee, after having resided a short time near Natchez, attempted to form a settlement about twelve years ago; but the Indians drove the new settlers away; and that ingenious and worthy gentleman buried himself near the mouth of Pensacola, but finally revived for a short period, and ended his days in a situation more congenial with his talents, as a judge at Atacapa, in the territory of Orleans. After the expulsion of Dr. White and his associates, no one ventured to attempt the settlement of the country, till within the last four years, and there are now again established a few families on Bogue Chitto and on the west side of Pearl river. The low lands, or swamps, as they are called, of both these streams, are extensive, but those of Pearl river, below the mouth of Bogue Chitto, are too subject to inundation ever to support a considerable population. As you emerge from the river swamps, you enter a vast pine forest, which with only occasional interruptions at the several water courses, stretches over the whole of West Florida. The staple production of the agricultural part of this province, it is needless to mention, is cotton: but it is said that the sugar cane can be cultivated with ad-

vantage in the lower part of the settlement on the Mississippi.

The main part of New Feliciana, and of the province generally, is, however, at the present day of little value but for its timber and pasturage ; and the latter, though it has nutriment sufficient to keep the cattle in good order almost all the year round, seems to want that peculiar succulent quality which is favourable to the production of milk and the profits of a dairy. As to the population of the western district of West Florida ; the mass of it is adjacent to the Mississippi ; and if the calculations be accurate, which have lately been made as to the number of men capable of bearing arms, it is probable that there are in the whole district at least 15,000 souls.

We shall now proceed to give a sketch of that part of West Florida which lies east of Pearl river. The swamps of Pearl river are extensive and fertile, as well on the east as on the west side of that stream: and the river itself, after some large rafts are cleared away which now obstruct the navigation, will probably, in moderate freshes, admit the passage of small schooners some distance above the American line. At a ford near the line, it is scarcely more than ancle deep in a dry summer season ; but it was not till within three or four years that the existence of such a ford was known even to persons residing on the river. The timber of the low grounds of this and other considerable rivers of West Florida, are oak, (of which several species are evergreens) gums, bays, laurels, magnolias, cotton wood, ash and cypress. Bodies of cane, of a gigantic stature, are often so compact as to be nearly impenetrable. They are from an half inch to an inch and a half or even two inches in diameter, and from 20 to 40 feet high. The same observations apply to the swamps of Pascagola and Mobile ; but all those rivers, as well as the other streams, where the water is nearly still, are infested by the alligators, or American crocodiles, which are destructive to the smaller animals, as hogs and goats, when they approach the place of their concealment.

The population of the eastern as well as of the western bank of Pearl river, is very inconsiderable. From the American line to the mouth of the river, it is probably between 70 and 80 miles, as this is one of the widest parts of Florida; but in that distance there are not 20 families. The next water course east of Pearl river is Benasouah, where there is a family or two; but the sea coast is uninhabitable from Pearl river till you approach the bay of St Louis, a distance of about 25 miles, as it is a continued marsh from Castain Bayou almost to this bay, and is not in its natural state either habitable or tillable.

The bay of St. Louis is a handsome situation, and the shore of the pass of Christianna, a mile or two beyond it, is bold and commanding, but the land at neither place is of any value. There are probably ten or fifteen families, chiefly French, round the bay of St. Louis, and about four or five, chiefly heretofore of French free negroes and mulattoes, at the pass of Christianne, which in the summer and fall has of late been accustomed to receive an accession of inhabitants from New Orleans, invited to that airy situation by the prospect of health.

From the pass of Christianne, to the bay of Biloxi, a distance of 24 miles, it is a very pleasant ride along the beach, and if you can procure any means of crossing the bay, it may be continued 15 miles farther to the mouth of Pascagola. There are about a dozen families at the bay of Biloxi, and about 16 or 18 on the Pascagola, within a few miles of the sea, and there are no more between that river and the neighbourhood of Mobile, a distance of about 55 miles, except two families at a place near the sea coast, called the Bayou Batrie. To the northward of the places we have mentioned, as far as the American line, there are no settlements except about 18 families up the Pascagola: nor does the country exhibit any species of improvement whatsoever. Even the roads through the province are nothing but mere Indian paths, and the scattered settlements exhibit but slight indications of the existence

of a government. It is about 4 miles across the several branches of the Pascagola and the intervening marshes, intersected by bayous and cut-offs, and from thence the level open pine woods, extending to Mobile, are for many miles so flat as to be covered with a thin sheet of water in the rainy season of the year.

Mobile stands at the head of the bay of the same name, and the *fickle* disposition of its river, (first uniting in one grand body, near Fort Stoddart, and after rolling with majesty towards the ocean for the space of six miles, dividing into two channels, and dividing again at six miles further, but afterwards uniting, and yet finally falling into the bay by three channels,) fully justifies the name of Mobile, given it by the French. The town is on the western channel, and is about three leagues distant from the eastern channel, which is connected with the opposite side of the bay.

The islands formed by the different branches of the Mobile river, are on an average about 8 miles wide, and about 35 miles long, and contain considerable quantities of valuable land, which with the necessary improvements would produce an immense quantity of rice.

From the town of Mobile to Pensacola, after crossing the bay, it is about 70 miles, through a desert almost uninhabited—there are two families only on the road. There are two small settlements near the sea coast. At Fish river near the lower end of the bay, on the east side, are four families; and at Bon Secours, still lower down, there is a similar settlement:—and going northward from thence to the American line, there are about 18 families more on the east side of the bay and river Mobile, and 15 families on the western side. From Pensacola to the Appalachicola, the eastern limit of West Florida, it is an uninhabited wilderness; and the same may be said as to East Florida till you approach the settlements adjacent to the Atlantick ocean. No tribes of Indians inhabit West Florida, but the Indian title has not been extinguished to more than one third of the country between the Mobile bay

and Pensacola, nor to any part of the province east of Pensacola. The Seminoles, who are united in the Creek confederacy, reside in East Florida.

As to the population of Mobile and Pensacola, it is not easy to estimate it accurately: but it is probable that Pensacola does not contain, exclusive of the soldiery, more than two thousand, and Mobile probably not more than four hundred. The story which has circulated so generally, of Pensacola being lately taken possession of by the English, is destitute of the slightest foundation. The whole population of West Florida, east of the Pearl river, may probably amount to about three thousand souls. The adjacent American district east of the Pearl river, contains about eight thousand inhabitants.

Previously to the establishment of the American boundary by Mr. Ellicott, under the treaty with Spain, the whole formed one district; and the similarity of their interests, and the intimate connection between the people on the north and south sides of the line, clearly indicate an union under one government, which on the cession of Florida to the United States must become permanent. No intercourse whatever exists between the people of West Florida residing in the eastern and western districts; and the same may be said with regard to the American settlements on the Mississippi and those in the eastern district, excepting that very slight and artificial connection which results from the circumstance of the district east of Pearl river having been included within the general boundaries of the Mississippi territory. *(National Intel.)*

ON THE NAVIGATION OF THE OHIO.

[*The following just and judicious observations were addressed to the Earl of Hillsborough, in the year 1770, when Secretary of State for the North American department.*]—Harris's Journal.

"NO part of North America will require less encouragement for the production of naval stores, and raw materials for manufacturies in Europe, and for supplying the West India islands with *lumber*, *provisions*, &c. than the country of the Ohio; and for the following reasons:

"1st. The lands are excellent, the climate temperate; the native grapes, silk-worms, and mulberry trees, abound every where; hemp, hops, and rye, grow spontaneously in the vallies and low lands; lead and iron are plenty in the hills; salt springs are innumerable; and no soil is better adapted to the culture of tobacco, flax, and cotton, than that of the Ohio.

"2d. The country is well watered by several navigable rivers, communicating with each other;—by which, and a short land carriage, the produce of the lands of the Ohio can, even now (in the year 1772,) be sent cheaper to the sea-port town of Alexandria, on the Potowmac river in Virginia (where the troops of General Braddock landed,) than any kind of merchandise is sent from Northampton to London.

"3d. The river Ohio is, at all seasons of the year, navigable with large boats, like the west-country barges, rowed only by four or five men; and from the month of February to April large ships may be built on the Ohio, and sent to sea, laden with hemp, iron, flax, silk, tobacco, cotton, pot-ash, &c.

"4th. Flour, corn, beef, ship-plank, and other useful articles, can be sent down the stream of the Ohio to West Florida, and from thence to the West-India islands, much cheaper and in better order, than from New York or Philadelphia, to those islands.

"5th. Hemp, tobacco, iron, and such bulky articles, may also be sent down the stream of the Ohio to the sea, at least 50 per cent. cheaper than these articles were ever carried by land carriage, of only sixty miles, in Pennsylvania; where wagonnage is cheaper than in any other part of North America.

"6th. The expense of transporting European manufacturies from the sea to the Ohio, will not be so much as is now paid, and must ever be paid, to a great part of the countries of Pennsylvania, Virginia, and Maryland. Whenever the farmers or merchants of the Ohio shall properly understand the business of transportation, they will build schooners, sloops, &c. on the Ohio, suitable for the West India or European markets: or by having black walnut, cherry tree, oak, &c. properly sawed for foreign markets, and formed into rafts in the manner that is now done by the settlers near the upper parts of the Delaware in Pennsylvania, and thereon stow their hemp, iron, tobacco, &c. and proceed with them to New Orleans.

"It may not, perhaps, be amiss to observe, that large quantities of flour are made in the distant (western) countries of Pennsylvania, and sent by an expensive land carriage to the city of Philadelphia, and from thence shipped to South Carolina, and to East and West Florida, there being little or no wheat raised in those provinces.

"The river Ohio seems kindly designed by nature, as the channel through which the two Floridas may be supplied with flour; not only for their common consumption, but also for the carrying on an extensive commerce with Jamaica, and the Spanish settlements in the bay of Mexico. Millstones in abundance are to be obtained in the hills near the Ohio; and the country is every where well watered with large and constant springs and streams for grist and other mills.

"The passage from Philadelphia to Pensacola is seldom made in less than a month, and sixty shillings per ton, freight, (consisting of sixteen barrels,) is usually paid for flour, &c. thither. Boats carrying 800 or

1000 barrels of flour may go in about the same time from Pittsburgh as from Philadelphia to Pensacola, and for half the above freight; the Ohio merchants would be able to deliver flour, &c. there in much better order than from Philadelphia, and without incurring the damage and delay of the sea, and charges of insurance. &c. as from thence to Pensacola.

"This is not mere speculation; for it is a fact, that about the year 1746, there was a great scarcity of provisions at New Orleans; and the French settlements at the Illinois, small as they then were, sent thither in one winter upwards of eight hundred thousand weight of flour."

COMMERCE OF THE OHIO.

We have been obligingly favoured with a transcript from the books of Messrs. Nelson, Wade, and Greatsinger, for two months, viz. from Nov. 24, 1810, to Jan. 24, 1811, 197 flat, and 14 keel boats, descended the falls of Ohio.

18,611	bls.	flour	59	do.	soap.
520	do.	pork	300	do.	feathers
2,373	do.	whiskey	400	do.	hemp
3,759	do.	apples	1,484	do.	thread
1,085	do.	cider	154,000	do.	rope yarn
721	do.	do. royal	681,900	do.	pork in bulk
43	do.	do. wine	20,784	do.	bale rope
323	do.	peach brandy	27,700	yds.	bagging
46	do.	cherry bounce	4,619	do.	tow cloth
17	do.	vinegar	479	coils	tarr'd rope
143	do.	porter	500	bushels	oats
62	do.	beans	1,700	do.	corn
67	do.	onions	216	do.	potatoes
20	do.	ginsang	817	hams	venison
200	groce	bottl'd porter	4,609	do.	bacon
260	galls.	Seneca oil	14,390	tame	fowls
15,216	lbs.	butter	155	horses	
180	do.	tallow	286	slaves	
64,750	do.	lard	18,000	feet	cherry plank
6,300	do.	beef	279,300	do.	pine do.
4,433	do.	cheese			

ALSO,

A large quantity of potter's ware, ironmongery, cabinet work, shoes, boots, and saddlery—The amount of which could not be correctly ascertained.

☞ Taken from the Pilots' books, at Louisville, Ken. this 8th Feb. 1811. By JAS. M'CRUM.

CORRECTIONS.

Page 27, third line from the bottom, instead of " below this the Indiana territory to the Mississippi river," read " the Indiana territory to the Wabash river and from hence the Illinois territory to the Mississippi river."

Page 79, Island No. 9, is one mile below Little Beaver.

Page 80—Brown's island—on the right hand side is a mill-dam, therefore the left of the island to be taken.

Page 82. From Wheeling island on the right side to the main land is a large rope fixed for the convenience of ferrige, which prevents navigation on that side in high water.

Page 84, Note—Harris's admeasurment of the big Grave at Grave Creek makes it 67½ feet in height, instead of 75 feet.

Page 160, line 13—for shrubbery read shrubby.

Page 164, line 15. Instead of " 1776" read 1791.

Page 168. The distance from Crow river to Michilimackinak ought to have been stated at 40 miles, from thence to Semi Quian river 30, to Demi Quian lake 10, to Demi Quian river 10. to Mine river 40, and to the mouth of the Illinois 90 miles.

George Welch the last

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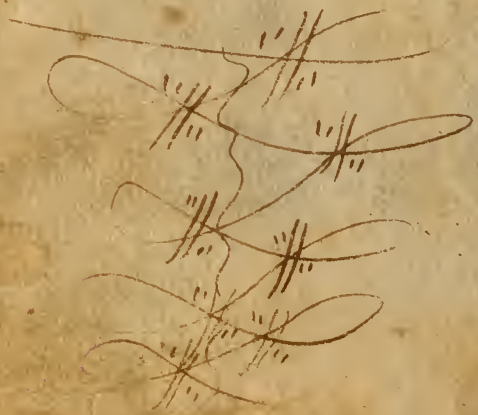

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